MAR 8 1927

PERIODICAL ROOM
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THE AMERICAN School Board Journal

A PERIODICAL OF SCHOOL ADMINISTRATION

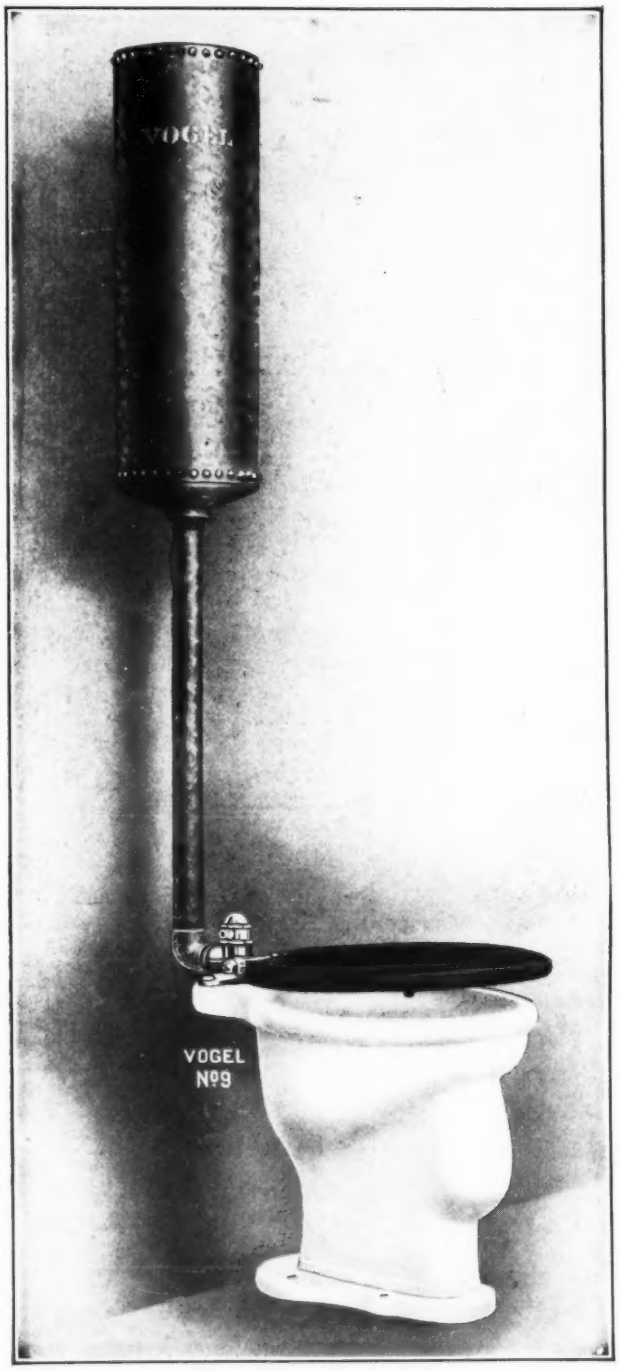
MARCH, 1927

The Bruce Publishing Company
Milwaukee, Wis.

VOGEL

PATENTED

Number 9 Automatic School Water Closet



This closet is made to stand the rough usage of the school water closet.

Economical in the use of water.

Seldom requires repairs.

Easy of access when repairs are necessary.

The simplest and most durable automatic water closet.

Many Thousands in use.

Sold by Wholesalers of Plumbing Supplies Everywhere

JOSEPH A. VOGEL CO.

Wilmington, Delaware **St. Louis, Missouri**

PERMANENT AND ECONOMICAL NATURAL SLATE BLACKBOARDS

Installing Natural Slate Blackboards means conserving your taxpayers' money—for there is no wear-out, no depreciation whatsoever to Natural Slate.

It is Sanitary, Dustless, Fireproof, Easy-to-Clean, Easy-to-Write-On — the one material that will satisfactorily and permanently meet all modern school room requirements.

Think of it, Natural Slate Blackboards installed in 1863 in Philadelphia are still in daily use—as good as new.

Think of it, the City of Chicago, besides many other cities and towns, uses Natural Slate Blackboards entirely.

You, too, after an actual experience with Slate will become a lifetime booster.

Write for interesting and complete data on Natural Slate Blackboards.

NATURAL SLATE BLACKBOARD CO.

108 ROBINSON AVE., PEN ARGYL, PA.

Athey

Cloth-Lined Metal *Weatherstrip*

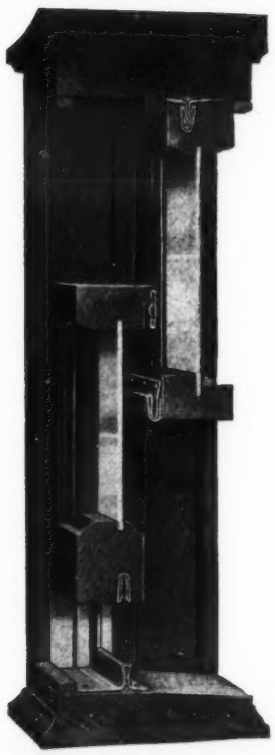
The cloth-to-metal contact "seals" windows against drafts and dust

The ordinary type of weatherstrip, which consists of a metal rib fastened to the window frame and running in a slot cut in the sash, *can't be completely efficient.* For both upper and lower sash are deeply grooved for one-third their height to take care of the sash cord, so no protection is afforded for these parts.

The protection for the balance is only partial as the sash must be fitted loosely enough to allow for the swelling of the wood.

To overcome this objection a two-piece metal strip is often used. This is more efficient but it has been found that when the two metal members are fitted tight enough to exclude drafts the free operation of the sash is retarded.

In Athey Cloth-Lined Metal Weatherstrip the metal tongue runs in a metal channel which is *lined with cloth.* This makes a perfect contact—actually "sealing" the windows against drafts and dust—yet the windows never stick as the cloth is sufficiently pliable to take care of any swelling in the sash. **And even when the windows are loose the efficiency of Athey Weatherstrip is not lessened, as the contact is sufficiently pliable to compensate for any looseness in the fit of the sash.**



Notice how completely Athey Weatherstrip seals the window against drafts and dust by the flexible cloth-to-metal contact—the only contact yet devised that makes windows weather tight without making them hard to open and close.

The Only Cloth-Lined Metal Weatherstrip Made

The cloth-to-metal contact is an *exclusive feature found only in Athey Weatherstrip.* It is covered by basic patents, so no other weatherstrip can be made that way.

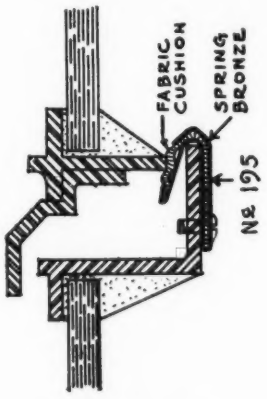
The metal channel and rail are manufactured of imperishable zinc. They will not rust. The cloth used is specially prepared fabric, guaranteed by us to be rot-proof, damp-proof and moth proof. It is so "crimped in" that it can't pull out.

Inspection of many Athey installations—*some of them made as long as 10 years ago*—showed the cloth to be as good as the day it was put in, and the entire strip in excellent condition.

Proved best by scientific tests—also in hundreds of fine buildings

Some time ago, a prominent firm of architects in New York City, conducted a series of experiments to determine the efficiency of various types of weatherstrip.

The best results were obtained with a cloth-lined metal weatherstrip; the tests showing that under a 15 mile per hour wind this strip admitted only .08 cubic feet of air per minute, for each lineal foot of perimeter, as compared to approximately .25 cubic feet admitted by the weatherstrip that ran second best.



Special strip for drawn steel sash

For Wood or Metal Sash

Athey Cloth-Lined Metal Weatherstrip can be used with either wood or metal sash (either rolled or hollow steel) with equally fine results.

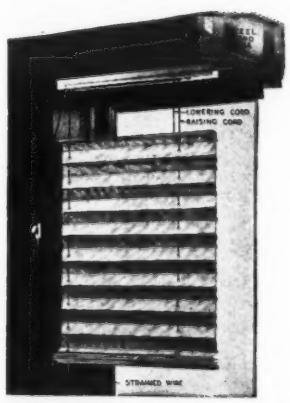
The cut at the right shows the standard strip for wood sash. Note the contact of metal to cloth. This provides a perfect "seal" which is sufficiently pliable to permit the windows to be opened and closed easily.

The cut at the left shows the special Athey strip for rolled steel sash. Notice the contact of cloth to spring bronze—so tight that it excludes all drafts yet pliable enough to compensate for any untrueness of the sash. **Leading manufacturers of metal sash recommend Athey strip as the best for use with their products.**

Used in hundreds of the finest buildings including many leading schools. Ask for complete information.

Detail of equipment for wood sash. The channel is inserted in the edge of the sash and the rail nailed to the jamb.

The same principle of cloth-to-metal contact is used for both hollow metal and rolled steel sash.



Detailed drawing showing construction and operation of Athey Perennial Window Shades

Athey Perennial Window Shades

Athey Perennial Window Shades can be lowered from the top, or raised from the bottom, folding like an accordion. With them it takes only a moment to shut out the sun's direct rays, and this is accomplished without shading the entire window and making distant parts of the room dark.

Because they let in the light yet shut out the glare they are ideal for school buildings.

The cloth of which they are made is a high-grade herringbone weave coutil—as near indestructible as cloth can be made. The shades run on strained wires so they cannot flap out of open windows and tear. And they have no latches, catches or rollers to slip, stick, or break.

Long life considered they are the *most economical shades obtainable.*

Athey Products

Perennial Window Shades
Cloth-Lined Metal Weatherstrips
Athey Disappearing Partition
Athey Skylight Shades

SEE OUR CATALOGUE IN SWEETS

Athey Company

6033 WEST 65TH ST., CHICAGO

New York City: F. H. KEESE, 7 East 42nd St.

In Canada: **CRESSWELL - McINTOSH, Reg'd—270 Seigneurs St., Montreal, Quebec.**

Buying the best for your schools, Saving the most for your public, Is JOHNSON SYSTEM of HEAT CONTROL

Automatically controlling each school room constantly and correctly at the degree of temperature required during school hours, regardless of outdoor weather changes: Johnson Dual Thermostat System supplies a night time fuel economy as well. At the close of school for the day, operation of a wall switch turns off the heat in all of the rooms save those to be used at night: for night classes, meetings, etc. Next morning the same wall switch operation turns on the heat in all of the rooms again for the day. A day and night heat control convenience and fuel economy factor of invaluable worth, AND DEFINITELY ESSENTIAL.

Every notable advance in Automatic Heat Control has been of Johnson origin, development and perfection. And now The Johnson System retains priority to even a farther extent with its Dual Thermostat, Night and Day, Automatic Control of each individual room's heat. This adds further convenience of definite value. More important, it increases fuel saving to as much as 40 per cent annually. Johnson Dual Thermostat, Night and Day, Heat Control is decidedly the system to install in your schools.

JOHNSON SERVICE COMPANY . . . MILWAUKEE

AUTOMATIC TEMPERATURE REGULATION SINCE 1885
TWENTY-NINE BRANCHES UNITED STATES & CANADA

JOHNSON
SYSTEM OF TEMPERATURE AND HUMIDITY CONTROL

The All Metal System . . . . JSC . . . . The Dual Thermostat System

KEWANEE

Smokeless Boilers

Cut coal costs by eliminating smoke

Smoke is waste—good fuel going up the stack ***unburned.*** It is the dragon that steals a buildings' profits from the owner's safe.

Kewanee Smokeless Boilers burn *all* the coal put into them. They cut coal costs because none of their fuel is wasted up the stack as smoke. **And this is true even when they burn the cheapest grades of soft coal.**

And don't forget that all Kewanee Boilers are of **steel (riveted)**—which provides them with that overstrength necessary for many years of repair and trouble proof operation. It's a fact that Kewanee Boilers usually outlast the buildings they heat.

If you haven't all the necessary Kewanee Facts drop us a line. We'll send you enough evidence to convince any one.

BY INVITATION MEMBER OF NEW YORK, U. S. A.

KEWANEE BOILER COMPANY KEWANEE, ILLINOIS

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Atlanta, Ga. Birmingham, Ala. Boston, Mass. Charlotte, N. C. Chattanooga, Tenn. Chicago, Ill. Cincinnati, O. Cleveland, O. Dallas, Tex. Denver, Colo. Des Moines, Ia. Detroit, Mich. El Paso, Texas Grand Rapids, Mich. Indianapolis, Ind. Kansas City, Mo. Los Angeles, Calif. Memphis, Tenn. Milwaukee, Wis. Minneapolis, Minn. New Orleans, La. Philadelphia, Pa. Pittsburgh, Pa. St. Louis, Mo. Salt Lake City, U. San Antonio, Tex. San Francisco, Cal. Seattle, Wash. Spokane, Wash. Toledo, O. Toronto, Ont., Can. New York City, N. Y.

STEEL HEATING BOILERS, RADIATORS, WATER HEATERS, TANKS AND WATER HEATING GARBAGE BURNERS

EAST DENVER HIGH SCHOOL. George H. Williamson, Archt.

The Heart of the

SPENCER

VACUUM CLEANING SYSTEM

Standard Equipment *in over* 1200 Schools

THE wide acceptance and use of Spencer Systems of vacuum cleaning in schools is the best evidence of the efficiency and dependability of the Spencer System in solving the school cleaning problem.

And to further emphasize Spencer preference, the majority of the schools of recent erection are being Spencer equipped. Among these is the East Denver High School, illustrated above. A complete list would include the finest and most representative educational institutions in the country.

The sound engineering principles underlying the multi-stage turbine and the thorough manner in which our engineers have worked out problems of vacuum cleaning, have established a confidence in the Spencer System that has resulted in its acceptance as the standard in vacuum cleaning equipment for school installation.

The recommendations of our Engineering Department may be obtained on any cleaning problem without cost or obligation.

Write for list of school installations and complete data regarding Spencer Equipment.

The Spencer Turbine Company
Hartford, Connecticut

Recognized Reliability

INCORPORATED 1898

MARYLAND CASUALTY COMPANY

F. HIGHLANDS BURNS, PRESIDENT.

HOME OFFICE - BALTIMORE

BOILER, ENGINE, ELECTRICAL MACHINERY, SPRINKLER AND WATER DAMAGE DEPARTMENTS AND INSPECTION DIVISION

J. W. RAUSCH, MANAGER

CABLE ADDRESS "MARCASCO"

PLEASE ADDRESS REPLY TO WRITER AND QUOTE CAPTION

January 6, 1927.

Pacific Steel Boilers Corporation,
Waukegan, Illinois.

Gentlemen:

In reply to your letter of January 4th, we have been inspecting and insuring under our boiler shop contract, Pacific Steel Heating Boilers for about six years. During this period, we have inspected and furnished insurance policies, each for a period of one year, for several thousand Pacific boilers.

Our records do not show of a single claim having been made under any of these policies.

Yours very truly,

J. W. Rausch
Manager

JWR:EAJ

Pacific Products

Pacific Smokeless Boilers for Soft Coal
Pacific Direct Draft Boilers for Soft Coal
Pacific Direct Draft Boilers for Hard Coal
Pacific Oil Fired Boilers
Pacific Down Draft Boilers
Pacific Steel Residence Boilers
Pacific Circulating Tanks

Sales Offices in Following Cities:

Atlanta, Ga.	Cleveland, O.	Indianapolis, Ind.	Newark, N. J.	Salt Lake City, Utah.
Asheville, N. C.	Columbus, O.	Kalispell, Mont.	New Orleans, La.	San Antonio, Tex.
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PACIFIC

STEEL HEATING BOILERS

BRISTOL, PA. WAUKEGAN, ILL.

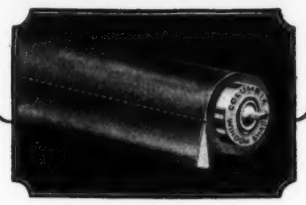
Von Duprin

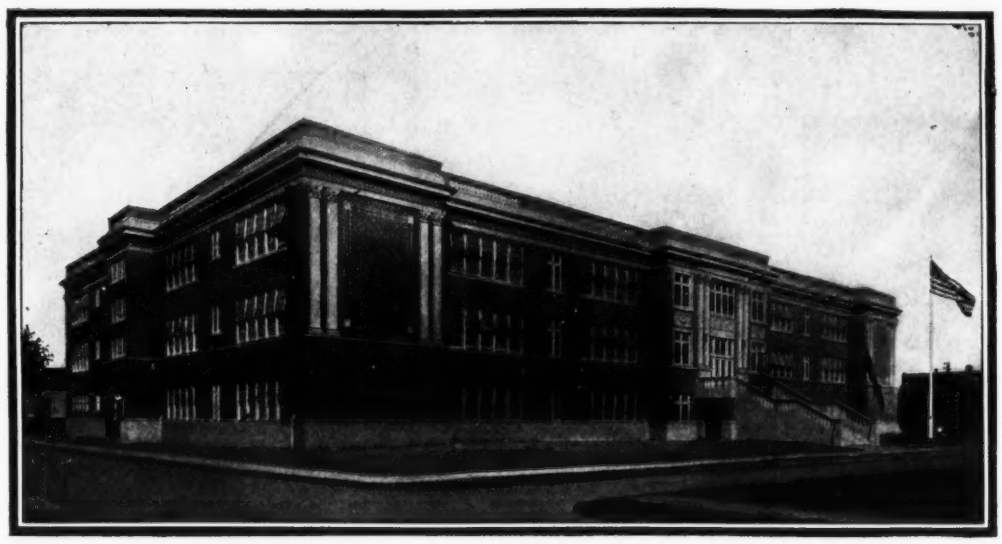
Self-Releasing Fire Exit Latches

Perhaps it is merely a coincidence, but the fact remains that the men whose judgment impels the specification of Von Duprin latches are the men to whose judgment is intrusted most of the important building work in the United States.

AIA

VONNEGUT
HARDWARE CO.
Indianapolis, Ind.
ESTABLISHED 1852





Washington School
New Orleans, La.

Equipped with Columbia Crescent Tint Window Shades on Columbia Rollers.

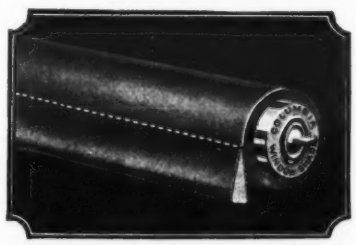
Between glare *and* gloom *in* daytime lighting

WINDOW shades that are only dark-colored, opaque "blinds" are not merely old-fashioned. They are a constant nuisance to instructors and students as well. When lowered, they exclude practically all daylight—which is bad. And when raised they admit too much light—floods of harsh, eye-straining glare that makes everyone nervous and uncomfortable—which is worse.

But between these two extremes there's a happy medium—*Columbia* Window Shades in translucent tone colors—warm, cheerful colors that filter all glare from the strongest outside light, and transfuse it with their own mellow tints. No glare, no gloom, but instead a gentle, evenly diffused glow which fills the school room with an atmosphere of cheerfulness and makes application to studies easier.

Yet that's only one side of the story. Durability is the other. *Columbia* Window Shades and Rollers have constitutions of iron! They are built for the kind of wear and tear that most school equipment receives with a plus margin of endurance that means years of faultless service.

But judge their beauty and quality first hand. Allow us to send samples of *Columbia* Shade Cloth and a *Columbia* Roller. Gratis, of course. Please use the coupon below. It is for your convenience.



Trouble-proof! That is the reason *Columbia* Rollers are standard equipment in so many schools. And here are the features that combine to make them trouble-proof. Nickel-plated ferrules of brass instead of the usual steel make them *rust-proof;* their self-lubricating bearings make them *noiseless;* a finely tempered steel spring 40% stronger than the ordinary spring makes them *durable.* Yet *Columbia* Rollers cost no more than rollers which lack these superior features.

The *Columbia* Mills, Inc.
225 Fifth Avenue, New York

Baltimore Boston Chicago Cincinnati Cleveland Detroit Pittsburgh
Kansas City Fresno New Orleans Philadelphia Portland (Ore.)
St. Louis San Francisco Minneapolis Los Angeles

To save you time

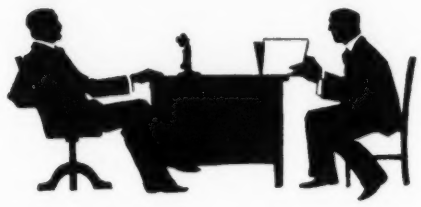
Insure shade satisfaction by using the "Standard Specification for Window Shades," which we'll send on request. This covers every point which should be included in your specification. A specimen roller and samples of Columbia Shade Cloth are sent with specification. Mail coupon to The Columbia Mills, Inc., 225 Fifth Ave., New York.

Name .....

Address S-3-27

Columbia
GUARANTEED
WINDOW SHADES
and ROLLERS

The Right Way to renovate your School Building



Let a Sonneborn Expert advise you about what repairs your building needs

WITH vacation time approaching, you are thinking about much needed repairs.

We would like to show you how Sonneborn products can renovate your building economically, yet lastingly.

An expert on school building upkeep will call on you in response to the coupon below. He will give you his best advice about what your building needs in the interest of necessary, economical upkeep.

Get our advice regardless of the size of your repairs. We are just as much interested in small jobs as in large ones, for we realize that if we serve you faithfully on smaller jobs, larger orders may follow.

If, as the result of our expert's recommendations, you decide to use Sonneborn products, we will welcome your order, but you will be under no obligation to trade with us.

Year after year we have been working with leading schools and colleges. You can have the benefit of what we have learned. You will get the proper products, careful workmanship, reasonable prices. You can have the satisfaction of knowing that the work, at no greater cost, will be done right, and guaranteed by an old, established concern.

The coupon below will bring an expert to consult with you.

SONNEBORN PRODUCTS
for SCHOOL UPKEEP

LAPIDOLITH concrete floor hardener will make your concrete floors permanently wearproof and dustproof. No more unhealthy dust. No more depreciation.

CEMCOAT is a special paint that stays white after other paints turn yellow. Can be applied to plaster, concrete, brick or wood. Used for hallways, auditoriums, etc.

LIGNOPHOL preservative floor dressing will keep your wood floors from splintering, rotting or drying out. This treatment lasts for years.

SONOTINT is a special, flat, washable, wall finish for classrooms. Easy on eyes. Has no lustre. No poisonous ingredients. Dirt wipes off without marring finish.

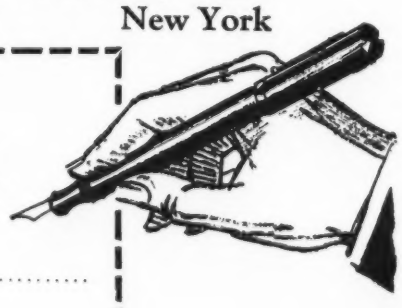
L. SONNEBORN SONS, Inc.

114 Fifth Avenue New York

COUPON

L. SONNEBORN SONS, INC.,
114 Fifth Ave., New York

Without incurring any obligation, I would like to talk with your representative about school building renovation.



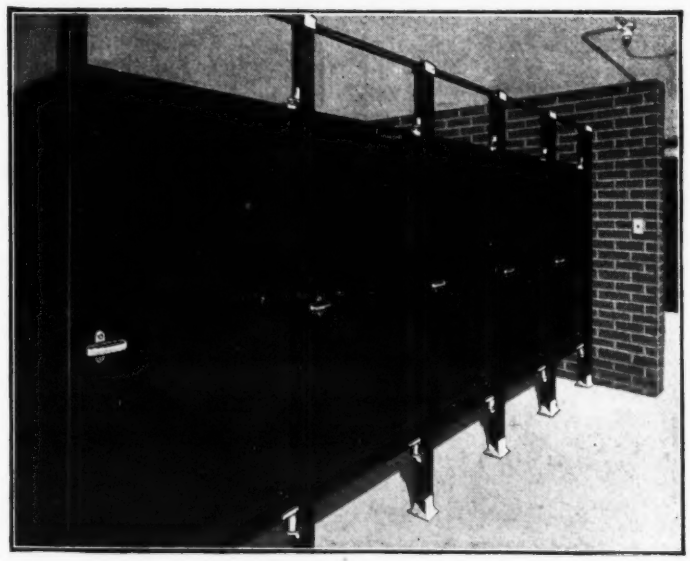
Name .....

Address .....

SBJ-3

Craftsmanship in Metal

The Sanymetal Symbol



Toilet Partitions, St. John's School, Cleveland, O.

Proof Against the Years

SANYMETAL School Partitions are actually built to withstand extraordinary wear. Built of heavy gauge metal, accurately fitted and interlocked. Built securely into, not onto, your walls, floors, and ceilings. Finished in best baked enamel on a foundation of metal furniture sheets (toilet partitions protected by sublimed blue lead).

They will live longer in your school building than ordinary metal partitions because they are *built differently* than ordinary metal partitions.

Sanymetal Products for Schools are: Toilet, shower, dressing and urinal compartments. Corridor and smoke screens. Metal doors and wainscot. Sanymetal Gravity Hinges. Write for New Catalog No. 15.

The Sanymetal Products Co.

1703 Urbana Road Cleveland, Ohio

Sanymetal

TRADE MARK U.S. REG.

Toilet and Office

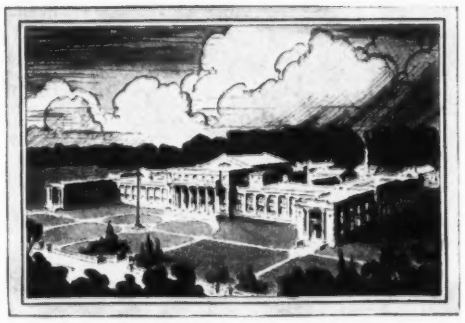
PARTITIONS

UNIVENT and Glass – *make the difference*

OUTDOORS — nature unrestrained! But in the class room fresh outdoor air tempered and tamed.

With windows closed to keep out the fury of biting winds and yet let in the light, the Univent brings into the school room the invigorating fresh out door air—cleans it and tempers it to June like temperature.

The Univent is designed for the one purpose of bringing out door air directly into the school room—robbed of chill, dust and soot, and distributing it uniformly throughout the school room with gentle agreeable air motion but without drafts. In warm weather when heating is not necessary, the gentle air motion in the Univent ventilated room is as refreshing as an early morning summer breeze.



*Wm. Penn High School, *equipped with . . .*

UNIVENT (TRADE MARK)

VENTILATION

Write for the book "Univent Ventilation"; it shows why control is the first requisite of ventilation, and proves why Univent ventilation is the simplest, easiest controlled, most effective, most economical system of ventilation known.

In installation and operation it is more economical than opening windows and gives uniform results despite weather conditions. Write for the book "Univent Ventilation"; it tells facts worth knowing.

* * *

** Wm. Penn High School, Harrisburg, Pa. Charles Howard Lloyd, Architect, Harrisburg, Pa. Herre Bros., Heating and Ventilating Contractors, Harrisburg, Pa.*

Manufactured only by THE HERMAN NELSON CORPORATION, *Moline, Ill.*

Builders of Successful Heating and Ventilating Equipment for 20 Years

Sales and Service

BELFAST, ME.	NEW YORK CITY	SCRANTON	CLEVELAND	CHICAGO	ST. LOUIS	DENVER	SEATTLE
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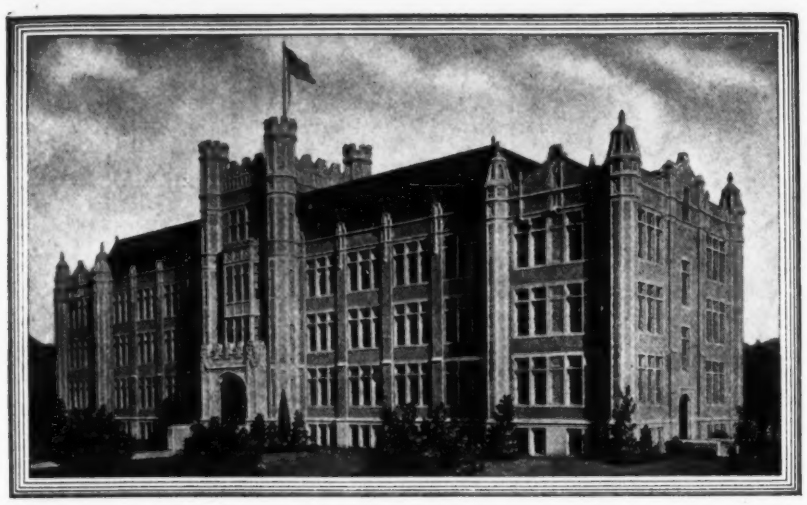


Oak Floors are in use in the Women's Institute of Domestic Arts and Sciences, Scranton, Pa.

SANITATION

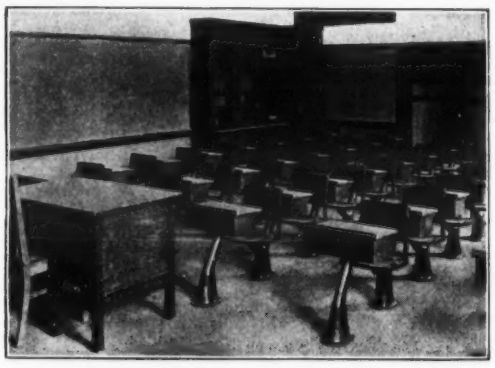
—*a prime requisite in school floors*

In schools, hundreds of feet tramp in and out daily, tracking dust and dirt. The wear on the floor is continuous and extreme. No material meets the need as does Oak Flooring. It is Nature's own product, healthful under foot, shock-resisting, not cold or artificial; yet it is a permanent floor, enduring heaviest wear, and always beautiful.

Every day should find school floors bright and clean, if buildings are to maintain themselves on the plane that modern standards require. It is easily possible with floors of OAK, laid in tight continuous strips, with no cracks to collect dirt, and a polished surface that makes cleaning easy.

Permanence

As a matter of expense, permanence is as important as sanitation from a health point of view. Oak floors will last; they never need replacement, and with minimum care they keep in perfect condition. The finish, whenever necessary, may be quickly and cheaply renewed.



Economy

Initial cost is low. Upkeep expense is low. When service covers years of hardest usage without deterioration, the economy of oak floors is unquestioned.

Oak Flooring, with side and end matching accurately milled, forms a secure and sound anchorage for desks.

Beauty

The atmosphere of the place where children spend a large part of their character-forming days, is closely studied in the modern school. Sturdy American oak builds respect for soundness and good taste.

Send for valuable free literature

The advantages of oak floors are fully brought out in literature available for your reference files, which will be mailed on request to school board members, and those interested in the equipment and maintenance of schools.

OAK FLOORING BUREAU
867 Hearst Bldg., *Chicago*

Put your flooring problems up to our experienced experts. We will help you without obligation.

Consult an Architect Before Building

This advice appears in all our national magazine advertising.

Mail the coupon for "The Story of Oak Floors," a 24-page illustrated booklet, containing color plates of the new modern finishes, which harmonize with room decoration.

OAK FLOORING BUREAU, 867 Hearst Bldg., *Chicago*

Send me "THE STORY OF OAK FLOORS," a 24-page book with color plates of the new modern finishes; also other useful literature for reference files.

Name.....

Address.....

City..... *State*.....

Safety in Schools

School officials, who are responsible for the protection of the lives of the pupils and are anxious to make proper provision for quick exit in case of fire or panic, will find in

SARGENT

Fire Exit Door Bolts

an adequate equipment which meets all conditions. The Sargent Cylinder Locks with which they are fitted provide for complete security and prevent entrance from the outside of the building when school is not in session, while they can be arranged to permit entrance during school hours, if desired.

Quick Exit at All Times

is provided and in case of necessity the doors can be instantly opened by slight pressure on the handle bars at any point.

Door Checks

close the doors, during their day by day use, quickly and quietly, the application shown in the illustration with the Sargent special foot (No. 35) being particularly desirable.

Sargent Fire Exit Door Bolts, Locks and Hardware are sold by representative dealers in all cities.

SARGENT & COMPANY

Manufacturers

New Haven, Conn.

New York **Chicago**

Riverside Polytechnic High School — Riverside, California

G. STANLEY WILSON, Architect
Riverside, California

Awning Type Windows Excel for Schools

Ideal Ventilation and Light Control

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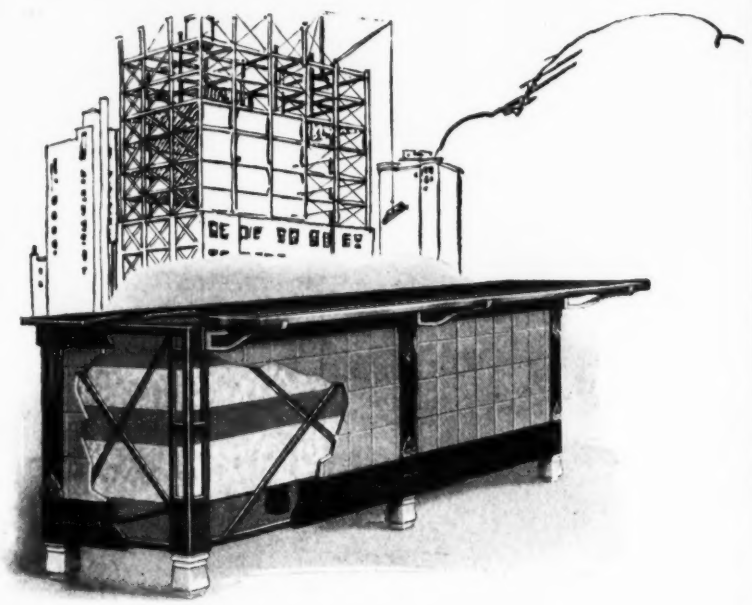

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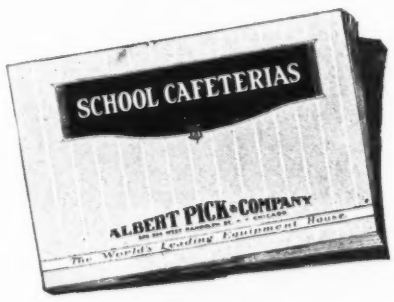

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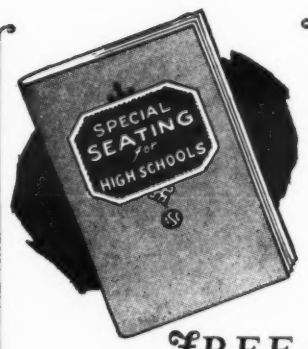

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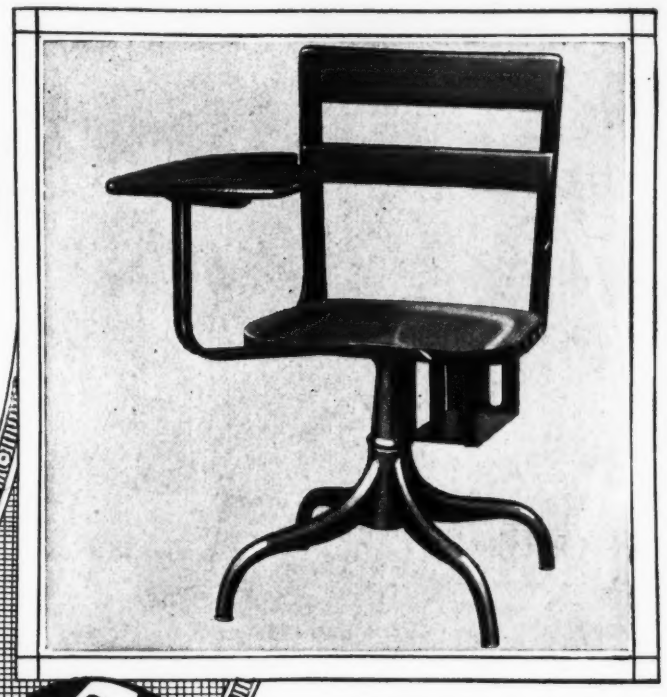

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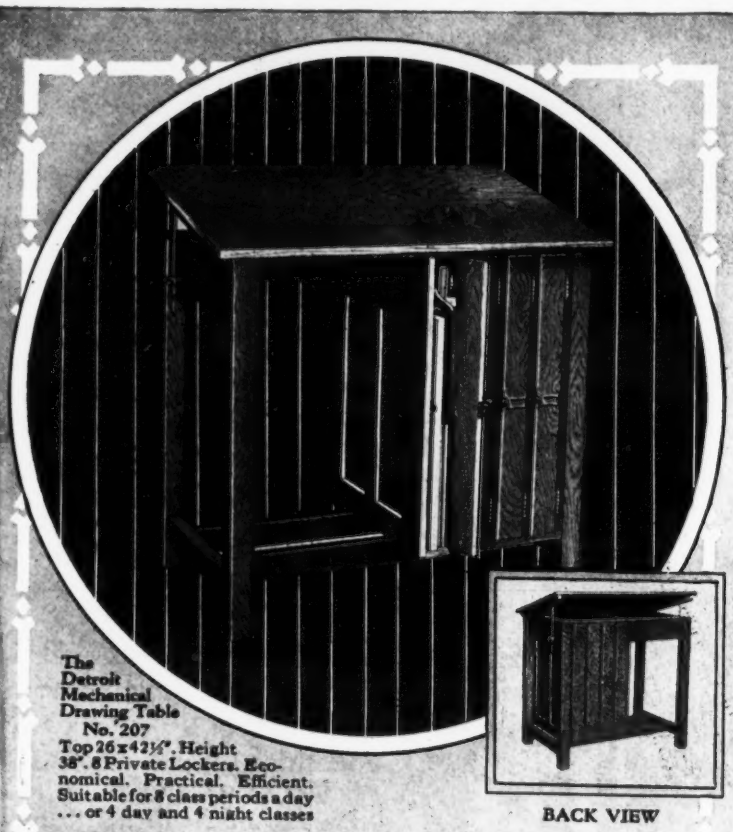

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It served at a window for sixty-three years and watched the troops of three wars go by

THE Hartshorn Roller reproduced above was hung in the window of a Brooklyn home in the stirring days of '64. It looked out upon the soldiers of another war in '98. It served in the same old window, accompanied by a blue-starred service flag, in 1918.

And all through those sixty-three years, it never failed to respond to a hand upon the shade cord. It was made to serve. It DID serve —for more than twenty-two thousand days.

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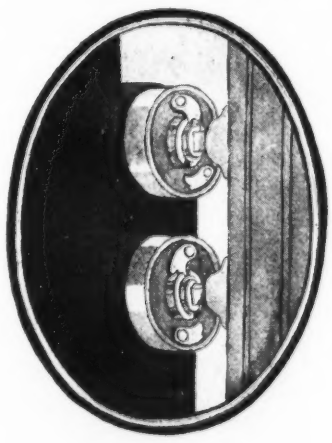

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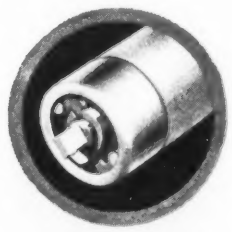

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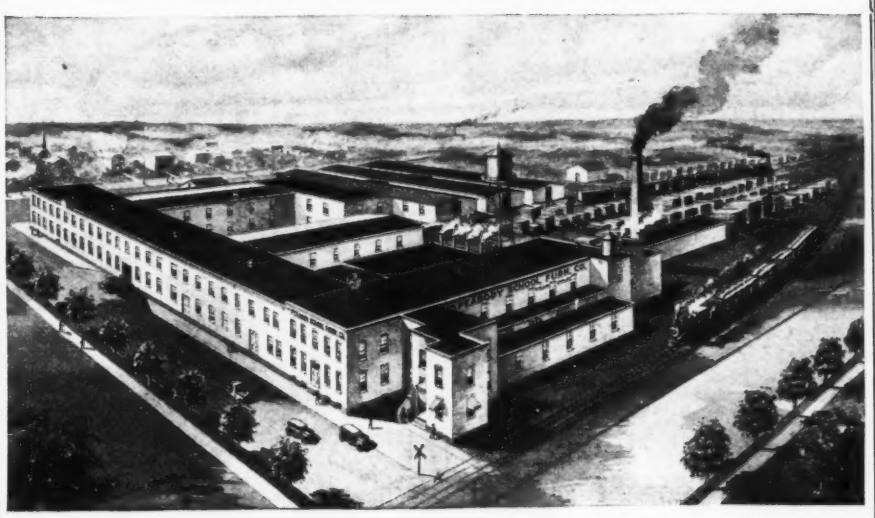

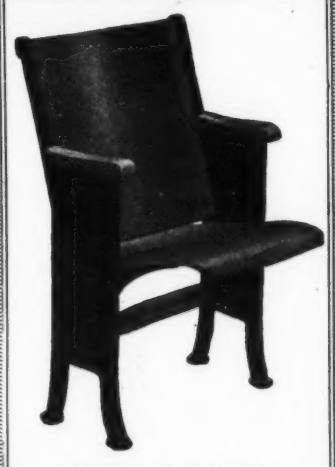

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Movable Desk No. 627

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Movable Desk No. 628

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	Max. Height	Min. Height	Max. Height	Min. Height	
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No. 3—16x22 L. L. or 14x22 O. B.	28½"	22½"	15"	11⅝"	13 to 7
No. 5—16x22 L. L. or 14x20 O. B.	23½"	19½"	12¾"	10½"	8 to 5

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The "Standard Line" Library Chairs are attractive in design and appearance, comfortable to sit upon and are built to withstand severe use.

Write for our 1927 catalog showing complete line.

No. 5018 Library Chair

Standard School Equipment Co.
Incorporated
Louisville, Kentucky

MANUFACTURERS OF MODERN SCHOOL FURNITURE.
Chairs, Desks, Tables, Bookcases, Cabinets, Dictionary Holders, Stools.

Sold through the leading School Supply Distributors

ELGIN
SCHOOL TABLE

Note These Improvements

IN keeping with our 60-year policy of constantly improving our products, we announce the following outstanding improvements to the Standard *Elgin School Table:*

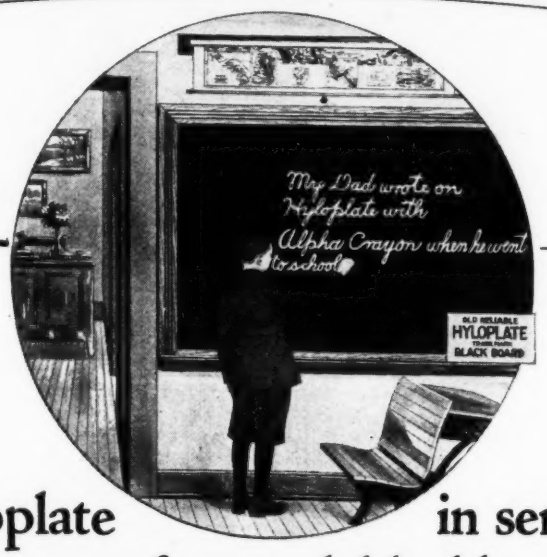
1. *Numerous betterments on the under frame, including metal corner irons and other strengthening features.*
2. *Beautiful 5-ply top—it stays "put."*
3. *Lacquer finish.*

The *Elgin School Table* is now, more than ever, a permanent investment and represents a real value. Schools the country over are demanding this equipment to meet present-day standards in the seating arrangements of their first and second grades.

A portable table, permitting clearing of floor space. Hygienic, sanitary. Permits greater freedom, increases seating capacity, reduces costs and follows out the successful new plan of "group instruction."

Send for free booklet "SEATING EFFICIENCY."

RINEHIMER BROS. MFG CO.
ESTABLISHED ELGIN, ILL. SINCE 1867
DEPT. OF SCHOOL FURNITURE



More Hyloplate in service today than all other manufactured blackboards combined

Universally accepted for its unusual economy and unrivaled high quality . . . the standard of comparison for forty-three years . . . there is more Old Reliable Hyloplate in service today than all other manufactured blackboards combined.

Not long ago one of our distributors received a letter which read as follows:

"*We purchased of you* about twenty years ago a blackboard *for our cotton office. We think it was called Hyloplate. We are going to change the location of our office and we are thinking of getting a new blackboard. We would like to get one made of the same material if possible, and we are writing you to inquire if you still sell this kind of board.*"

It is this kind of service, coupled with a velvet writing surface that has created a world-wide demand for Hyloplate totaling more than 42,000,000 square feet in the last 30 years.

Today Hyloplate is used in schools throughout the United States and in 22 other countries. Hard, close-grained and smooth . . . warp, chip, crack and break proof . . . its tremendous popularity has been a major factor in making its producers the largest manufacturers of blackboard in the world. Fully guaranteed by the makers and by the distributor who sells it to last 10 years or more. Easy to install . . . black or green. The genuine always has the trademark on the back. Write for catalog 3H, to obtain sample and detailed facts.

OLD RELIABLE
HYLOPLATE
TRADE MARK
BLACKBOARD

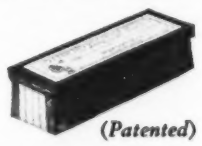
TIME TESTED W.C. SCHOOL SUPPLIES

Geographical Globes

W. C. Globes are specially adapted for school use . . . on desk or table, or hung from ceiling. For 45 years unexcelled in mechanical construction. Imported lithographed maps. Color guaranteed not to fade. Hour circle on each to indicate the time anywhere in the world. 30 styles and sizes. Write for catalog 3G.

Costello Double Sewed Eraser

Sanitary, easy to keep clean. Reinforced back prevents curling up, spreading, or breaking down in use. No "pockets" between felts for dust to enter. Nothing but felt used in its construction. Noiseless. Works better, lasts longer. Chosen by school boards everywhere. Guaranteed perfect. Write for catalog 3E.



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Bacon Standard Wall Maps

Larger than others at same prices. Lithographed in 9 colors. Machine-mounted on heavy cloth backing. Engraved to allow a larger map of each country, revised to time of issuing edition. Detail clear and clean. Show comparative time, steamship routes with distances, heights of mountain peaks, and principal railroads. Better, but cost less. 48 x 41—United States, Europe, Asia, Eastern and Western Hemispheres, World, North America, South America, Africa. Write for catalog 3B.

Alpha Dustless Crayon

Patented 57 years ago. Uniform high quality, made of high-grade imported materials in a special factory . . . no soap, grease or other ingredients harmful to blackboards used. Dustless, sanitary, writes clean and clear. Extra strong. In "hard," "medium" and "soft." Very economical. Write for catalog 3A.

Weber Costello Co. Chicago Heights Illinois

Imperial TEACHER'S DESKS

If your School Board desires desks above the average or has only a limited appropriation available and insists on buying low priced desks, you can meet the demands from the Imperial line.

Imperial Desks represent a value far in excess of what their moderate price would suggest. Their extreme sturdiness and wearing qualities are due to in-built construction features characteristic in the manufacture of every Imperial Desk. This is reflected in the many years of satisfactory service Imperial Desks render their users.

When ordering school, office or classroom desks, chairs or tables, be sure to specify, "Imperial" exclusively and look for the Imperial Trade Mark.

Circulars and name of nearest School Supply Jobber handling Imperial Desks, will be mailed on request.

IMPERIAL DESK COMPANY

Evansville, Indiana.

The Model Desk for Modern Schools

"UNION"

Liftop Movable and Adjustable Chair Desk

A modern design that embraces many practical features which time and experience have proved entirely correct.

"Union" Liftop Movable Study Chairs represent long experience in designing and producing high grade furniture for the schoolroom. All of the non-essentials have been eliminated; simplicity, durability and serviceability characterize these model pieces of school furniture.

The roomy seat and curved back form a restful combination. The plus or minus adjustment permits the writing table to be shifted to or from the pupil to accommodate his size. The lifting top provides easy means of ingress and egress without the usual distortion.

The convenient and commodious drawer is responsive and is equipped with stops which prevent falling out unexpectedly. The tops have that natural, permanent slant which experience has taught is the proper angle for both reading and writing.

1 and 2 Movable $10.25
3 and 4 Study 10.00
5 and 6 Chairs 9.75
F.O.B. Factory

Made In Six Sizes To Fit The Different Grades

A large stock just completed for immediate shipment

Union School Furnishing Co.

Manufacturers and Distributors of High Grade Furniture and Supplies for Schools

GENERAL OFFICES:
1034 W. Van Buren St., Chicago, Ill..

BRANCH OFFICES:
Memphis, Tenn.: DeLand, Fla.: Columbus, Ga.

Our Motto: *All School Furnishings*

STURDY FURNITURE

No. 810 Art Table

All "NYB" Tables and Stands are designed and built to withstand the most severe usage in the classroom.

Note the sturdy, compact design of our No. 810 illustrated below. This is a practical and efficient design, provides individual lockers for the students, eliminating confusion in the changing of classes.

Top, oak or pine, 20 x 34 x ⅞ inches with an adjustable top 20 x 24 inches.

Height of table 30 inches.

One general instrument drawer 16 x 16 x 2½ inches.

Three private lockers, 16 x 22 x 2¾ inches.

Three instrument lockers, 2¾ x 12 x 4 inches.

Master-keyed locks if desired.

Made of oak and finished as desired.

Our standard finish is three-coat, dull, rubbed smooth.

We solicit the privilege of quoting on standard as well as special equipment.

Ask for a copy of Catalog "N."

New York Blue Print Paper Company,

(*Wooden Goods Division*)

92-96 Terrace Ave.,

JERSEY CITY, N. J.

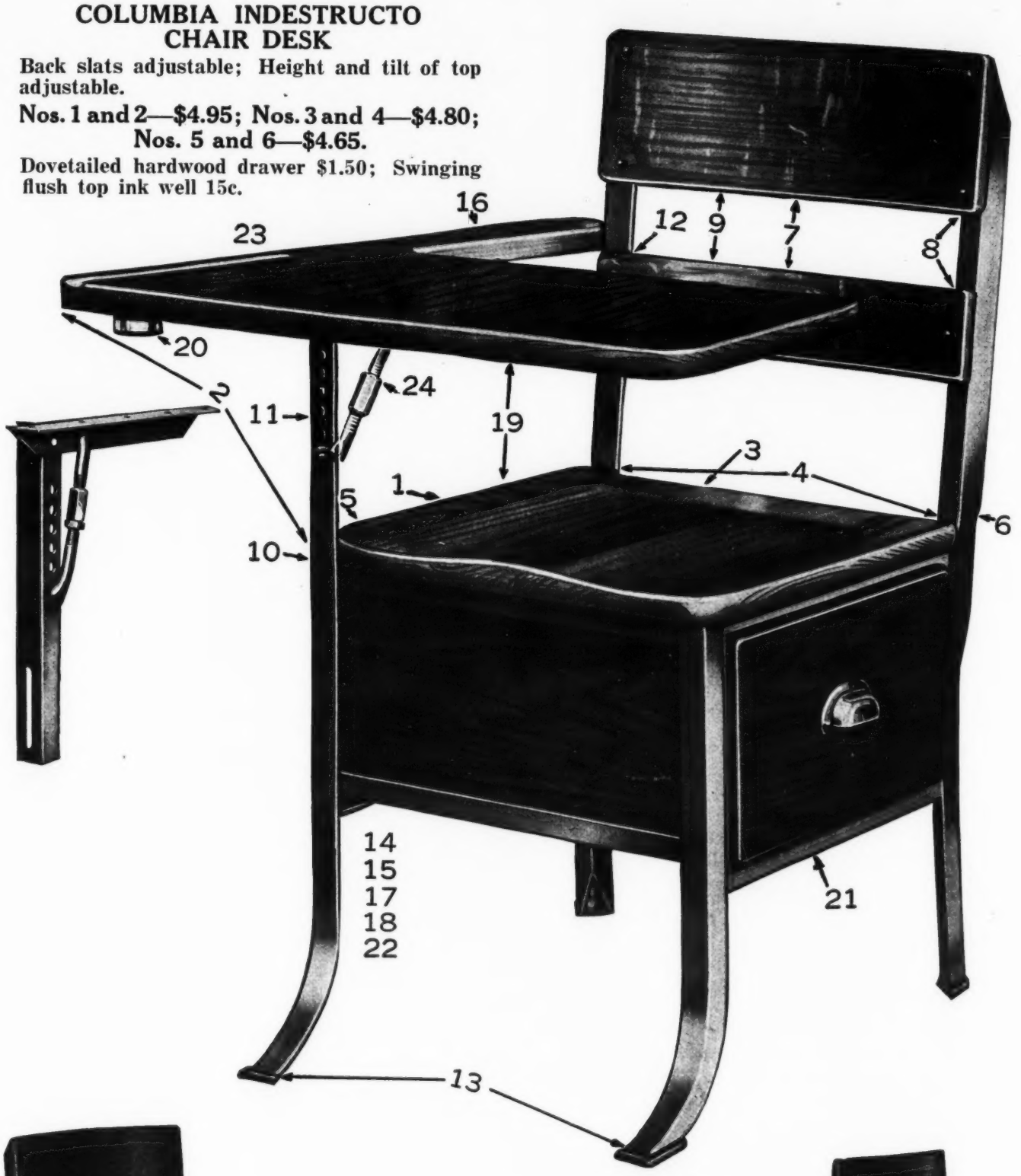
COLUMBIA SCHOOL SUPPLY CO. MOORE BROTHERS ~ PROPRIETORS 314-344 WEST 17TH ST. INDIANAPOLIS

COLUMBIA INDESTRUCTO CHAIR DESK

Back slats adjustable; Height and tilt of top adjustable.

Nos. 1 and 2—$4.95; Nos. 3 and 4—$4.80; Nos. 5 and 6—$4.65.

Dovetailed hardwood drawer $1.50; Swinging flush top ink well 15c.



COLUMBIA INDESTRUCTO TEACHER'S CHAIR AT $3.50

INDESTRUCTO'S POINTS.

1. Seat of proper height.
2. All corners rounded.
3. Seat saddled to fit body.
4. Seat of proper width.
5. Seat tilted higher at front.
6. Back tipped backward slightly.
7. Back curved to fit body.
8. Back adjustable in height.
9. Back of solid quartered oak.
10. Seat extends slightly under top.
11. Desk height adjustable to child.
12. Desk slant adjustable.
    11 and 12 constitute a Tilting Top.
13. Curved front feet give same strength and effect as separate support.
14. Desks easily moved for sweeping.
15. Noiseless, no hinges or swivels.
16. Arm rest extending backward.
17. Simplicity—Examine illustration.
18. Durability—Indestructible steel.
19. Finish, dull, lasting quality.
20. Flush top inkwell, noiseless, removable.
21. Box or sliding drawer.
    May be used on either side.
22. Nothing to catch dirt.
23. Pencil groove on top.
24. Adjustable.

COLUMBIA INDESTRUCTO TABLET ARM CHAIR AT $4.25. WITH PERFORATED SHEET STEEL BOOK SHELF 25c EXTRA

ALLOWS
FREE SPACE
FOR
SWEEPING

Made in three sizes
Large
Medium
Small

No. 600, illustrating
Size "A" Desk, Open
Box Style

THE "ARLO"
ADJUSTABLE PEDESTAL DESK

The "Arlo" Adjustable Pedestal Desk is our latest contribution to modern hygienic school room seating. A beautiful desk, both in design and finish, it is absolutely sanitary—exceedingly well adapted to the varying needs of any class-room and guaranteed to withstand the strenuous requirements of every type of class room service.

The pedestal is made of semi-steel, constructed to give greatest strength at the points of greatest strain. The broad, massive base is cup shaped and when screwed to the floor will never pull loose.

The "Arlo" Adjustable Pedestal Desk will last a lifetime; has steel sides and back and the top is made from maple or birch, finished in Arlo Brown (American Walnut).

Adjustments are simple and easily made. Book box chair seat are independently adjustable. This is a distinctive feature and makes it possible to adjust "Arlo" desks to meet the individual requirements of each pupil.

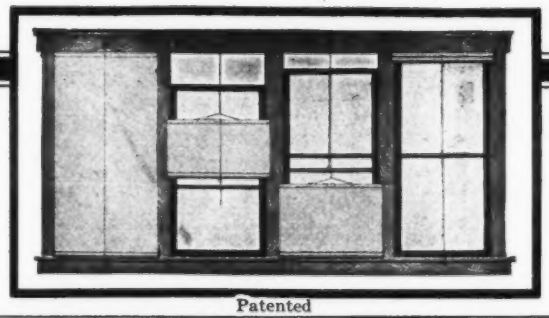
The "Arlo" Line includes The Arlo Adjustable Pedestal Desk with Study Desk, The Arlo Non-Adjustable Pedestal Desk and the Arlo Pedestal Tablet Arm Chair.

Descriptive literature and prices on request.

Flexibility of adjustments assures each pupil being properly fitted, insuring correct posture and real comfort.

Arlington Seating Company

Office and Factory — Arlington Heights, Ill.



Patented

Draper Adjustable Window Shades

— meet every school requirement

Draper's Adjustable Window Shades are guaranteed to give satisfactory service and will continue to do so over a long period of years—because they are built for service—and meet every window requirement most satisfactorily, efficiently and economically.

Let us solve your window shade problems. Tell us how many windows there are in your school building, give us the size, and our experts will be glad to make suggestions and will quote you on equipping your building. This service places you under no obligation.

Write for samples of Draper Shade material, prices and descriptive literature.

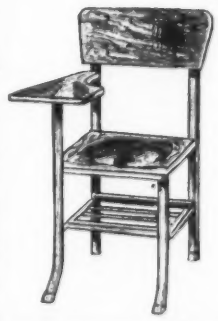
LUTHER O. DRAPER SHADE CO.
Spiceland, Indiana.

LET US SEND YOU A SAMPLE WITHOUT OBLIGATION

ROYAL FOLDING

SCHOOL FURNITURE of STEEL

SEE AND TRY BEFORE YOU BUY



COSTS NO MORE THAN THE ORDINARY KIND.

Samples sent for Free Trial at no expense. No obligation. Catalog on request.

ROYAL METAL MFG. CO.
2321-23 S. Western Ave.,
CHICAGO, ILLINOIS.

Economical—Everlasting

TRADE MARK
ENDURAROC
BLACKBOARD

ENDURAROC is everlasting—growing harder and possessing greater tensile strength with age. The process of manufacture is regulated by formula so that each and every slab is identical and does not vary in quality. **ENDURAROC** is just as permanent as concrete, brick, slate or other similar building materials.

ENDURAROC is made of asbestos fibre, Portland cement and coloring matter united under hydraulic pressure of 3,000 pounds to the square inch into dense homogeneous slate colored sheets ¼ inch in thickness. The panels then are put through our special surfacing process, to be had only with Rowles' products. The finished product, in its various treatments, is subjected to more wear than it will ever receive in a lifetime of school service.

ENDURAROC is the ideal blackboard for any type of school building regardless of size, cost or location. It is fire and waterproof, will not warp, bulge, expand or contract. It is uniform in thickness, light in weight, is available in long lengths, easy to handle, and cannot be broken by jars or vibrations. **ENDURAROC** weighs less than one-half as much as slate but is harder and possesses greater tensile strength.

ENDURAROC is from every viewpoint the most economical blackboard—not only in first cost but in installation expense, transportation charges and upkeep.

Write your nearest distributor or direct to factory for samples and further information.

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M'F'RS·SCHOOL FURNITURE & SUPPLIES
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For Dependable Blackboard Service

TRADE MARK REG.

SLATEBESTOS

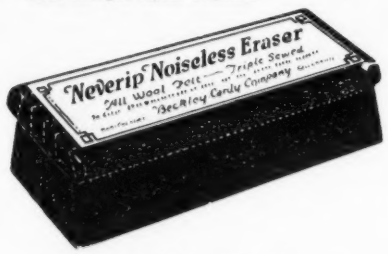
SOLID BLACK CLEAR THROUGH

The Permanent Blackboard

The Permanent Blackboard — Solid Black Clear Through

Neverip Noiseless Eraser

A one-piece casing eraser of unusual durability, built to live up to the inspiring promise of its name — it will never rip, it can't spread. The best blackboard eraser made.
Free sample upon request.



Simplex Noiseless Eraser

A high grade eraser now in use in the Chicago Public Schools and thousands of other places.
Free sample upon request.

SLATEBESTOS possesses all of the advantages of natural slate and none of its disadvantages. It is strong, sturdy, as hard as rock — actually tougher than natural slate. A permanent blackboard which improves with use, becomes harder and tougher in service and above all it has a perfectly smooth, rich, deep-black writing surface.
School officials and architects planning new buildings or replacements in old should investigate the merits of THE PERMANENT BLACKBOARD.

We also manufacture the well-known SLATE-ROCK AND SLATOPLATE BLACKBOARDS. Furnished in black, green or brown.

Prices and free samples of blackboards upon request.

BECKLEY-CARDY COMPANY

Manufacturers of Blackboards, School Equipment and Supplies

17 E. 23rd STREET CHICAGO, ILL.

Premium Dustless Crayon

A most satisfactory blackboard crayon, absolutely sanitary. Made of the finest imported chalk, carefully strained and washed. It is tempered and molded to produce a hard, dustless crayon perfectly suited for blackboard use.

PREMIUM
DUSTLESS CRAYON

Puro Dustless Crayon

Also one of our products. A high grade dustless crayon supplied at a low price. Sample free upon request.

Put the Guaranteed

LITTLE GIANT

ELECTRIC ERASER CLEANER

to Work in Your School

Price $32.50

The Little Giant is a modern hygienic device that should be in every school. Put this accepted aristocrat of blackboard eraser cleaners to work in your school under our guarantee of satisfaction.

THE Little Giant has been tested by continuous use in thousands of schools throughout the country. It has proved to be efficient, in all respects, noiseless, dustless, simple and swift in its operation. It is guaranteed to clean blackboard erasers to your entire satisfaction — or your money will be refunded.

The Little Giant is operated by a Universal motor, adapted to all electric currents; it is provided with nine feet of Underwriters' lamp cord with Universal plug ready to attach to any convenient lamp socket. Strongly made of malleable iron and aluminum, its weight is but eight pounds and it can be shipped by parcel post.

Address Dept. S
JAMES LYNN CO.,
14 E. Jackson Blvd., Chicago

THE LITTLE GIANT ELECTRIC ERASER CLEANER
Silent - Swift - Dustless - Simple - Inexpensive

VUL-COT is solid at sides and bottom — so that even the smallest particles cannot sift through onto the floor. Vul-Cot cannot dent or bend; cannot split or break; will not scratch fine furniture. Three out of five who buy equipment for schools and offices specify Vul-Cot. Guaranteed for five years — many have been in service for thirty. At stationery and school supply houses!

VUL-COT

-the standard waste basket

National Vulcanized Fibre Co., Wilmington, Del., U.S.A. *Offices in principal cities*

A Revolution in Seating
Has Been Caused by the
Moeser Extended Arm Rest

A Wonderful Finish That Does Not "Scratch"

We have developed a remarkable finish, by which the tannic acid in the wood is brought to the surface, bringing with it the natural color of the wood. The finish is developed within the fibre, consequently it cannot wear off nor rub off.

It has a richer, deeper color and a velvety "feel." It is both "hard" and "elastic"; also transparent. It is very pleasing and will harmonize with any interior finish. Woods treated by this process wear longer and retain their original finished appearance longer.

Ask us about it.

All these advantages with the Moeser Arm:

—Available working surface more than doubled.

—Full support for the back while writing.

—Arm supported while writing, resulting in better penmanship and less fatigue and nervous strain.

—Correct posture, encouraged by this Arm, insures protection from direct and reflected glare on the eyes.

—No necessity to twist body or incur strain on the spine.

A Remarkable Letter from a Well Known Superintendent

W. J. Hamilton, Superintendent of Schools, Oak Park, Ill., wrote:

"The arm rest on the desks is the best thing that we have found to insure erect posture, and the pupils assure us that the seats are more comfortable and more convenient for desk work through the addition of this arm rest. Our Board is placing a large order for further installation of this type desk.

"In Oak Park we have tried out practically all the various makes of school seats and find that there are several excellent models on the market. However, it is the judgment of our building department, our teachers and interested parents that the National School Equipment seating types meet our requirements the best of any. The workmanship is of the very best, quality of wood and materials is not equalled by any other makes that we now have, while the hygienic physical features are the best of any seating that we have in stock."

You will be interested in our Catalog and Circulars on National School Equipment.

The National School Equipment Co.

Manufacturers of Complete School Equipment

Port Washington, Wis.

NATIONAL School DESKS
"Famous for Comfort"

Viking All-Steel Indestructible Folding Chair

STRENGTH—

BEAUTY—

COMFORT—

It has them all

Viking Standard Finish is a rich olive green and it is baked on to insure a permanent finish. The chairs may be had in standard design in the following finishes: Walnut, Mahogany and Gold-Bronze.

The "Viking" Indestructible Folding Chair costs little more than the ordinary wooden chair.

Ideal for Schools

The Viking All-Steel Indestructible Folding Chair is built to stand up under unusually rough treatment, and misuse that is given to folding chairs.

The Viking is built of 20 gauge Steel throughout—is fireproof and cannot be bent or sprung out of shape. It cannot tip, sway, squeak or rattle and its BALL FEET make it noiseless and prevents scratching of the finest floors. It is 32½ inches high when open and the paneled seat is 14 x 13 inches.

Comfort has been built into the "Viking" Chair and with its inclined back it insures perfect comfort, which is not to be found in any other folding chair. We have designed the fibre seat and the full upholstered seat for those who desire even more in comfort.

Write for further details.

MAPLE CITY STAMPING COMPANY, PEORIA, ILLINOIS.

SQUIRES INKWELLS

We manufacture the Boston Inkwell in three different styles. All have hard rubber tops and the glasses fit either style of top. These fit 1 27/32 inch holes.

SQUIRES No. 58
BOSTON INKWELL

SQUIRES No. 59
BOSTON INKWELL

SQUIRES No. 60
BOSTON INKWELL

SQUIRES No. 12
COMMON SENSE INKWELL

Our No. 12 or Common Sense Inkwell is made in three sizes, to fit holes 1½", 1¾" or 1⅞". Corks with Caps or Rubber Corks furnished when desired.

We make several other styles of inkwells.

Write for Catalogue, Prices and Samples.

SQUIRES INKWELL COMPANY
508 - 2ND AVE. PITTSBURGH, PA.

NATIONAL

DUSTLESS CRAYONS

are truly Crayons of Character

Free of grit from tip to tip NATIONAL CRAYONS respond perfectly to every stroke.

Being uniform in strength, every piece of NATIONAL CRAYON will withstand a firm grip of the fingers without danger of breaking or crumbling.

The dustless feature, combined with uniformity in all other respects, makes NATIONAL the ideal crayon for the classroom.

Your regular school supply dealer can serve you. If not, write direct.

THE NATIONAL CRAYON CO.
West Chester Pa.

101 YEARS OF MANUFACTURING EXPERIENCE

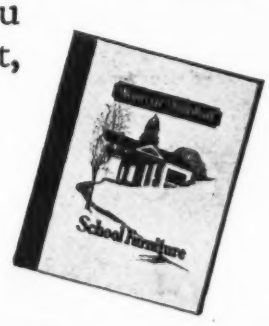
This is the H-W Combination Desk, a sturdy and trouble-proof school unit.

The H-W line of School Seats is most complete and contains many desirable models.

BUILT FOR STRENUOUS SERVICE

THIS is the Heywood-Wakefield Combination Desk, built to stand up under the long and severe use which every school unit is bound to receive. Its construction is so simple that there is nothing to get out of order, yet so strong that it will serve for years and years with one hundred per cent efficiency. The heavy PRESSED STEEL frame work and the solid wood parts are immovably united to make a desk that evenly and easily absorbs all weight and strain.

Our seating experts will be pleased to explain why this Combination Desk also permits closer spacing without sacrifice of comfort — why it affords a more economical means of seating. These men will also be glad to offer you practical seating plans, without cost or obligation on your part, upon request.



The advantages of this desk and many other school units are described in our new School Furniture Catalogue. Write for a copy.

Heywood-Wakefield
REG. U.S. PAT. OFF.

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Boston 45, Massachusetts Winter Hill
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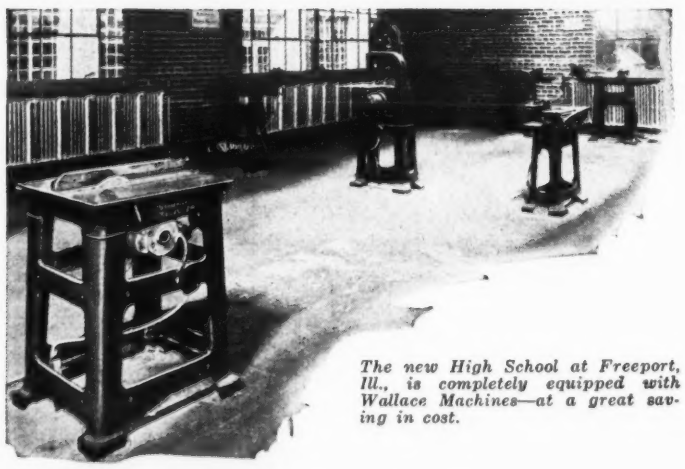
Build For The Future

Plan your equipment purchases with the same idea of permanence with which you plan the school building. Properly designed furniture, of handsome appearance and strong sturdy construction, should last indefinitely, and help materially to reduce replacement costs. Get acquainted with Hamilton Quality.

We show to the left Hamilton School Table No. 500 which has private compartments for six students. Ask for Catalog.

Hamilton Mfg. Co.

Two Rivers, Wis. Rahway, N. J.



The new High School at Freeport, Ill., is completely equipped with Wallace Machines—at a great saving in cost.

Standard School Equipment

—SAFE FOR BOYS

Thousands of Wallace Portable Beltless Machines are in daily use in the large universities, city and township high schools, grade schools, consolidated, rural and private schools.

Send today for the Wallace Illustrated Catalog and details of the trial offer. Let us put you on our free mailing list to receive the Solar-Wallace Plan Service for Instructors. This includes illustrated job sheets which can be used as regular assignments.

Send today.

J. D. WALLACE & CO.

152 S. California Ave., Chicago, Ill.

MANUAL TRAINING BENCH No. 280

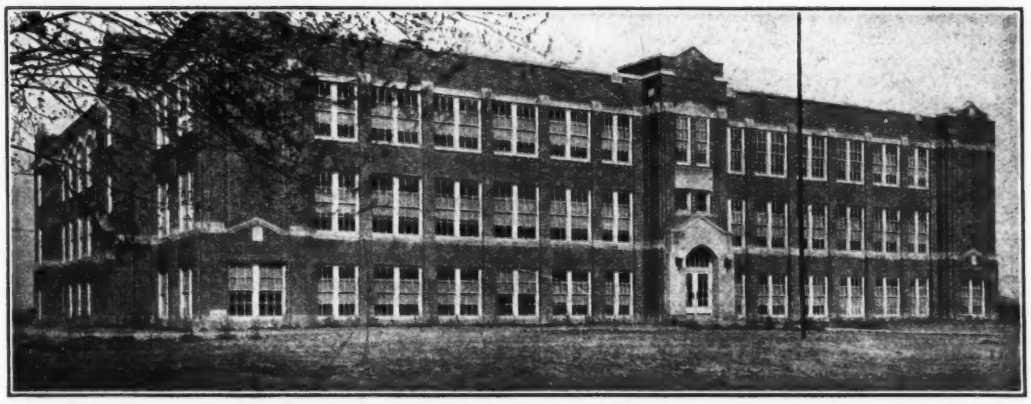
A GLANCE AT THIS NEW PATTERN will show that the combination of various sized drawers and cupboard makes an unusually practical bench. Notice, especially, the small drawer which is intended to hold nails, screws, small tools, etc., which so easily become misplaced when kept with the larger tools. Being able to immediately lay hands on these small but necessary items, will be the means of saving a great deal of time, thereby promoting efficiency. Also, notice the large cupboard, which will hold such tools and materials which can not be kept in the general or three private drawers. Bench is equipped with our Abernathy Rapid Acting Roller Nut Vise No. 70D on front, adjustable stop and dog.

C. CHRISTIANSEN

Manufacturer of this line since 1898

2814-2842 West 26th St., Chicago, Ill.

School Cafeteria equipped with Gunn Lino Tables



Lincoln Consolidated School—Ypsilanti, Mich. Warren Holmes-Powers Company, Architects

GUNN

"LINO" Desks
Trademark Reg.
for Teachers

"LINO" Tables
Trademark Reg.
for Cafeterias
are now used in
many of our
FINEST SCHOOLS

No Breakage of Tops

Quiet and Pleasing

Sample of Top and Full Particulars on Request

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Gowanda High School, Gowanda, N. Y.
Central School, Ithaca, N. Y.
Cornell University, Ithaca, N. Y.
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Ironton School, North Tonawanda, N. Y.
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Public School, Syracuse, N. Y.
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Public School No. 14, Troy, N. Y.
St. Joseph's Seminary, Troy, N. Y.
Brandegee School, Utica, N. Y.
Roscoe Conklin School, Utica, N. Y.
Woodmere Academy, Woodmere, L. I.
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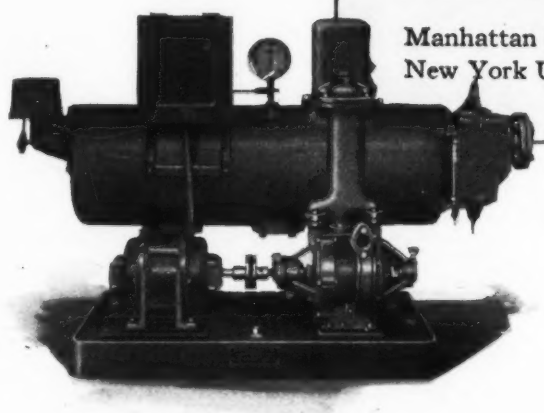

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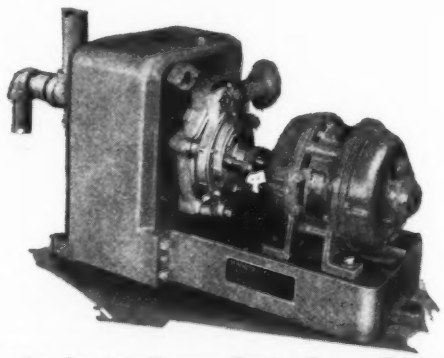

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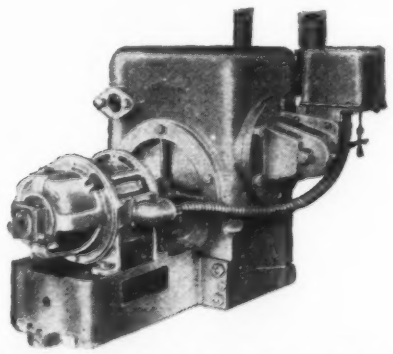

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THE AMERICAN

School Board Journal

A Periodical of School Administration

Frank Bruce, Publisher
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Our Thirty-Seventh Birthday!

WITH the March, 1927, number, THE AMERICAN SCHOOL BOARD JOURNAL enters upon the thirty-seventh year of its existence. It was in March, 1891, that the first number of this periodical made its appearance.

A volume might be written of the changes that have since been effected in the realm of popular education, in the expansion that has been effected, and the achievements that have been won. In the field of school administration, a great transformation has come about. The scope and function of boards of education and superintendents have been lifted from hazy conceptions into clear outline and bold relief.

Boards of education have been reduced from cumbersome size to smaller and more efficient bodies. The school superintendent, once a mere clerk of the board, is today the real administrator of the school system. The schoolhouse, once a four-wall and slant roof affair to keep out the rain and cold, today represents the highest architectural and structural skill.

In this splendid evolution, THE AMERICAN SCHOOL BOARD JOURNAL may claim a modest share. And its contribution to that progress means better school administration, better school housing, and better teaching. The same high ideals which actuated the publishers in the past will guide them in the future.

WILLIAM GEORGE BRUCE,
Editor.

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School Board Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

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A Welcome School Visitor!

Small-Town Essays

ON ATHLETES

One time I had a fight. It was a parliamentary fight and in the end I had my way. During one whole afternoon I made nine separate motions, which were lost because the vote stood a tie.

It was during a basketball tournament. The Tarday City high school had a bad name—they had been disqualified for playing a five-year man a few months before, and now they appeared at the tournament in Chapel Crossing with another player, who it was contended, was past 21 years of age. His name was Darling.

Darling was formally challenged. The principal of the Tarday City high school did not let him play during the opening games of the tournament. He said he knew that the charges were false, but he wanted to advise with his superintendent, to make sure that the documentary proof of the boy's innocence was perfect.

The tournament authorities appointed a committee of investigation. Darling, it was found, was an orphan living with his grandmother in Tarday City. His father had deserted the family about the time the boy was born and his mother died at his birth. No official record of a birth certificate could be discovered, for vital statistics were not faithfully kept in Montana twenty years ago. The school census in the county superintendent's office indicated that Darling was a month past his majority, but the principal of the Tarday City high school presented an affidavit by the boy's grandmother who swore the boy was only 20 years old. A similar affidavit was at hand from the Tarday City physician who attended Darling's mother at the time of her death.

There the case rested. The committee came in with a recommendation that Darling was lying about his age and that Tarday high school should be disqualified for playing him.

All Thursday afternoon and Friday morning the administrative convention wrangled over the committee's report. The vote on its rejection or acceptance was deadlocked. There was quite a bit of friction; considerable heat. Some of the men thought I had violated a confidence in reporting the details of the row to the daily press. Perhaps I did, but the stuff made interesting reading, hardly complimentary to the intelligence of the committee's report or the men who favored it.

My argument in favor of rejecting the report was that census records are notoriously inaccurate; that our affidavits from Darling's grandmother and the Tarday City doctor were conclusive; that the committee had been swayed by prejudice and the generally bad reputation of the Tarday City high school.

These were my stated reasons. Looking at it backwards now I believe that the real motive that prompted my behavior was sympathy for Darling. For I had talked the matter over with him Thursday morning at the hotel. Tears rolled down his cheeks and he said they were "doing him dirt" just because he was poor.

My heart went out to him. It was not until four years later—when a new superintendent had come to reign over the Tarday City schools, and there had been a professional earthquake in the athletic department, that I came to know the complete facts about that boy.

He was guilty.

ON INTERVIEWS

Last summer when I was in Missoula, serving as investigator on the staff of the Daily *Missoulian,* I had an occasion to interview Dr. Melvin A. Brannon, chancellor of the university.

It came about in this way: Some schoolmen attending the summer quarter of the university were very active proponents of the five-mill equalization measure which was to be voted by the people of Montana last fall. Some of these men argued that there had not been any firm stand taken by the University authorities. I was urged to see the Chancellor the first time he came over from Helena and ask him, categorically, five questions, designed to elicit a statement that would line up the university and enlist the support of the alumni.

I did. The chancellor answered my questions pleasantly, we chatted a moment and I went back to the office and wrote up my notes. When that was done I called up the hotel where Dr. Brannon was staying and read him my story. I suspect that I woke him up for it was past midnight. The telegraph editor and I were the only ones left in the editorial room at the time.

The interview read like this:

"As a general thing," the Chancellor said, "I am against any increase in the general property tax. I realize that the economic progress of the people depends upon the general intelligence and the colonization and development of Montana are linked with the equalization of educational opportunity, particularly in the rural sections.

"The five-mill school levy is really a one-mill net increase in districts which now apply a maximum, for it automatically abolishes four mills. The measure was proposed by the state legislature and signed by the governor. I am willing to follow those two branches of the government. If the measure is voted down by the people as unwise, I would not be surprised if the legislature were to propose to the people, sources of revenue other than the general property tax."

The next morning the Daily *Missoulian* came out with the interview under a 24a head:

BRANNON IS AGAINST
ADDITIONAL TAXATION
Chancellor Expresses View Regarding Increased Property Levies

In the afternoon edition the *Sentinel* carried the story as a pick-up under the head:

CHANCELLOR AGAINST
PROPERTY TAXATION
Expects Five-Mill Levy to Lose in November

The lead for the *Sentinel's* story contained the statement "expressed himself as being against the increase in the property tax for schools and expectant of its failure in November."

I have not seen the Chancellor since the night of the interview, and I cannot say whether the method of its treatment pleased him or not. No one else was pleased, at any rate some of my friends who had urged me to go get the interview declared that headlines furnished a typical case of a stupid and a malignantly kept press. The boys down at the *Missoulian* felt that some of the letters addressed to the *Missoulian* on the subject were lacking in fairness and courtesy. Later in the week the paper ran the interview the second time under the caption —"What He Said," and the editor who had been ill when the interview appeared wrote an editorial about the last sentence of Dr. Brannon's statement, which, the editor intimated, was dishonest. The editorial hinted that if those were the Chancellor's views the sooner his office was abolished, the better.

All of this embroglio over what appears, on careful reading, to be the thoughtful opinion of a man in a very trying and responsible position. One has to decide for himself whether the headlines were leading or misleading, stupid or intelligent, accurate or dishonest.

My own conclusions in the matter are that no one was particularly to blame for the misunderstanding unless it was myself. For I have known for a long time how poor a vehicle the news press is for published opinion; that to try to get the delicate niceties of professional propaganda into headline form is like trying to pitch hay with a shovel.

Anyway, as Mr. Maddock says, "Why badger a man into an opinion just because he happens to be the Chancellor of the university?"

ON PRIVATE MORALS

Years ago I had a trustee who caused a lot of trouble. He was elected through one of those conspiracies by which adroit, disgruntled patrons sometimes put over a man on the administration. He was not a learned man nor a clever one. He was manager of the creamery owned by the farmers in the neighborhood. His name was Wallace.

The chairman of my school board tried to conciliate Mr. Wallace but he could not. The new board member probed into present and past spending. He visited school and asked embarrassing questions of the teachers while they were holding classes. He denounced his colleagues on the street.

This situation endured for half a year. Finally the other members of the board decided to start a real fight. They hired a stenographer to take down Mr. Wallace's speech at the annual meeting of the tobacco pool. His statements were so palpably false that they filed charges of libel against him. But the matter never came to trial. For, one night Davis Haynes caught Mr. Wallace robbing a hen's nest and made him put the eggs back at the point of a gun.

I have told this story because it sounds so preposterous. For such trifling things as this, men throw away their influence in the community. Petty larceny had nothing to do with Wallace's ability as a leader, but it did have a lot to do with his loss of leadership. A few days after the exposé he got him a job further up the creek and caused us no further trouble.

ON PATRONAGE

In the state of Montana a trustee "may not be interested in a contract to which the school district is a party." In some states no relative of a school-board member, within the limits of consanguinity, may be elected to the teaching staff. It is quite in line with the American political logic that we grant to trustees a considerable discretionary power and then hedge that power by legislative enactment aimed to discourage selfishness and to furnish a guidepost to the unintelligent.

For my part, I cannot see why the niece of Mr. Appleby, our chairman, should be disqualified solely because her uncle holds a position of trust. If she were niece to the village drunkard she would not suffer such a legal handicap. Nor can I see any good reason why our school building should not be electrically lighted in the event that a school-board member should buy the village light plant. It is one thing to argue that nobody should have a preference because of political favoritism and another thing to disqualify a worthy candidate for a school-teaching position because of his blood relation.

There was once a professional city politician who was elected to a place on the school board. A week after he was sworn in he asked the superintendent to come to see him.

He placed a chair for the superintendent. He locked both doors leading into the office.

"Now, Mr. Superintendent," he said. "I have been elected on the school board. And my experience is that the greatest joy to be had out of this life is in doing things for our friends. I have a number of good friends who are teachers. I would like to have an understanding with

(Concluded on Page 161)

The Personal-Social Relationships of the Superintendent of Schools

Ben W. Frazier, Director of Training, Alabama State Normal School, Jacksonville, Ala.

Most of life's prizes go to those who have developed the technics of dealing effectively with individuals or with social groups. Wealth comes to the man who maneuvers himself into a position where other men work for him; power and public esteem to the man who knows the switches which flash on the currents of social control. Successful business and professional men are excellent practical psychologists. The superintendent of schools has an additional motive for delving into the lore of human ways; he is a sociological engineer dealing constantly in human materials.

The groupings of social traits with which we are endowed at birth, developed by constant adjustment to a human environment, constitute personality and affect morality, character, and executive ability. An organized group of individuals united by common interests constitute society. The superintendent as an individual, the nature of his social environment, and the interactions of the two, will constitute our study.

The Typical Superintendent

The typical superintendent of schools in American towns and cities was born in the early eighties. He belonged to a family of four children. His parents followed the commoner walks of life; his father earned on the farm, or otherwise by strength of arm, a little over $700 per year. There was plenty of work, but only a few books in his home, practically nothing of art, a little of music, and conversation dealing very largely with the everyday realities, prejudices, and fears of a simple existence. While his parents were English-speaking, their son has been fighting his early heritage of ungrammatical speech for twenty years.

It seemed too much a burden for the father to give his son sufficient money for a college education. The youngster, however, was fairly ambitious. He made something above the average in his school marks, but was not valedictorian of his high-school class. Before he was old enough to vote, he was teaching his first school. After several years, he graduated from college, older than most other members of his class.

He taught for a little over four years, and was then made principal, serving seven years in this capacity in different schools. In his last position as principal he earned a salary of $1,350. His lessons in personnel management in this place were with ten teachers and one janitor. Upon taking his next step upward, he was called "superintendent," and he has now borne this title for a bit less than a decade. He has held his present position for about four years, and will not remain in it very much longer. He is under contract for only one year. His mental state of hygiene is not salutary; he wonders where and when he is moving next; whether it is true that public-school men are "put on the shelf" in their late forties.

He is now, in the year 1927, a man in his early forties, and has dependent upon him a wife and two children. His wife is of his own social class, and is a rather good helpmate for a superintendent of schools, and would probably be teaching or otherwise earning money if she were not married. The superintendent earns $3,500 per year; his living expenses are $2,500; he spends for books, recreation, and professional improvement around $300.

He thinks of himself as a professional man. He is without competition, the only man of his occupation in town. He is a bit envious of the alleged earnings of certain doctors and lawyers. He has had, however, only five or six months of graduate work, while they have had three or four years of professional training. He took his last course eight years ago. His excuse is that his work is learned best by experience; that advancement is best secured from the field, while he is actually on the job; and that a man with a family cannot afford to spend the $1,200 or $1,500 plus loss of salary incurred by taking a full year off. Besides, he is getting along in years, and not so many are left now in which to realize on such a heavy investment. Society and his school board do little to change this philosophy of expediency. He realizes in a dim way his discontent with existing conditions in his system; but is he not a busy man? After all, it is not unpleasant to do in his bigger job the detail he drilled on so long during his apprenticeship. He is sometimes a bit shocked to learn upon returning from a week's leave of absence that things move along just about the same while he is away.

A PSYCHOLOGICAL VIEW

The personality of a superintendent is the sum total of all the reactions he makes to other human beings. The bunching of traits which are his personal-professional assets on the reaction side he owes to heredity, which was a bit more kind to him than to the average of his fellows. But his personality has a wider authorship; the ways in which he thinks and feels and reacts in the manifold situations of life—his habit mechanisms and reaction patterns—were formed in considerable part by the ministering hands, rough and gentle, of his acquaintances, friends, and enemies. It is surprising how small a part of a man's viewpoint is of his own making. There is a ceaseless working partnership between superintendent and town, which makes possible the constantly repeated miracle of personality formation. There is no more such thing as a perfect personality than there is a perfect society. The great among men simply harmonize most successfully with their fellows over a long period of time, entering positively and with vigor into the inner life of humanity. Nor is it necessary to do more than strike the major cords of the harmonics of humanity; the imagination of a sympathetic audience will do the rest; as instanced by the prevailing tendency of men to idealize the images of the great ones of history, whereupon their tradition carries on with cumulative strength on down through the ages.

Personality, then, is attained by the give-and-take of direct contact with one's fellows. And society is neither systematic nor diligent as a schoolmistress; there is but little attempt to make the punishment fit the offense; sometimes society smiles at our sins, and sometimes visits much suffering for no offense but weakness. Always is working the law of selection, the survival of the fittest. It is unfortunate that the graduate schools of education cannot offer the short cuts of educational learnings which would enable the superintendent to achieve such a body of professional skills in a better way than by undirected trial and error. He learns how to control individuals and social groups by almost wrecking two or three school systems, not to mention his own career. He needs more intelligent annoyers.

Some Mistaken Notions

As a result of failure to work on the principle that the proper study of mankind is man, there is a surprising amount of ignorance and superstition abroad as to "character reading" or "sizing up people." The protruding jaw may be of asinine as well as bulldog connotation. The high, broad forehead may indicate more bone than brain. The chief cause of high temper among the red-headed is in trying to live down the tradition. To consider thinness of lips, size of nose, or pitch of voice as particularly significant is on a par with the standards of an employment clerk who selected only men with green neckties who applied on odd days of the month. It is a worth-while study in human nature to ascertain why astrology, palmistry, phrenology, and other fake beliefs should be called in when significant clues like evidences of abundant physical and mental vigor, intelligence quotients, effectiveness and ease in speech and manner, and a host of other manifestations of significant traits lie ready at hand.

The assumption that the man who is much of the friendmaker, raconteur, or wily politician is merely compensating for his lack of abstract brain power by an overdeveloped social intelligence is likewise a mistaken notion. The following correlations, taken from Dickson and Terman, while not high, are significant. While for children, they hold very well for adulthood. Tests given to adults during the World War give similar results. Correlations of .30 or more are ordinarily regarded as significant:

Correlation of Personality Traits and Intelligence

Trait	Correlation with Intelligence Quotient
Sense of humor	.58
Persistence	.53
Initiative	.53
Will power	.50
Conscientiousness	.48
Social adaptability	47
Personal appearance	.44
Leadership	.44
Cheerfulness	.43
Physical self-control	.42
Courage	.39
Dependability and sincerity	.38
Popularity among fellows	.34
Emotional self-control	.29
Unselfishness	.29
Speed	.28

Positive correlations between I.Q. and physical ability, morality, and scholarship are also significant. In order to complete a list of commonly accepted personality traits, the following additional ones are listed:

Self-expression; address	Refinement
Sympathy	Ability to command attention
Enthusiasm and optimism	Alertness
Fairness	Sense of order
Reserve or dignity	Health
Cooperation	Taste
Use of voice	Self-reliance
Good fellowship	Interest in others
Idealistic traits	Firmness
Industry	Modesty (lack of vanity)
Loyalty	

To make use of this list advantageously, hold in mind your closest acquaintances among superintendents who are successful, and in succession compare yourself to them, marking each trait plus, equal, or minus as you place yourself in comparison. The differences between the sum of the plus and minus marks will be

instructive. You will discover desirable improvements in your powers of self-estimate, in the quality of friends you have, or opportunities for drill in improvement of certain selected traits.

It is unfortunate that it is so difficult for us to see ourselves as others see us. Of 93 high-school principals reported in a study by Briggs as having given up their careers as schoolmen, none admitted having felt unsatisfactory personal relations with teachers, and the two chief reasons which were advanced were of little pertinency to human relationships. Many did admit that the members of the school boards didn't like them, which might mean several things. However, when the principals' superintendents were asked as to the causes for the loss of the unhappy 93, they reported that standing out above all other reasons was the poor personal relations of these principals with teachers, school board, and public. The superintendents emphasized the necessity for development of tact, courtesy, respect, sociability, and friendliness for effectiveness in the multiple and complex contacts with other people so necessary in a principal's work. If not born with much social intelligence, one must develop mightily or get out.

All men have approximately the same qualities of instinctive tendencies; qualitatively, human traits are much the same the world over and throughout recent ages. A superintendent does not get away from enemies by changing towns. It is in the bunching of traits in each human personality, and in their quantitative development, that one's eternal uncertainty in dealing with human beings has origin.

Adjustment to vs. Sizing Up Situations

There should be consolation for the person who believes himself deficient in social abilities. Social intelligence is more nearly susceptible of development than either the mechanical or abstract varieties. Courtesy and friendliness may be assumed; investments with barber, bootblack, and tailor return heavy interest on small investments; one can learn to note down and tell good stories; he can cultivate unselfishness and good sportsmanship, in little matters at least; he can practice meeting people easily and leaving them gracefully; he can learn to listen to people talk, after he has maneuvered them into talking about themselves; and with practice he can follow the advice of a famous southern senator: "If you want to have friends, just be friendly to every living creature; and they'll all like you—dogs, men, and women."

It is more difficult to learn to size up social situations accurately. Women seem to excel in this. A popular explanation (among male biologists) is that her ancestresses, the early cave women, learned to discern the homecoming moods of their temperamental mates with a high degree of accuracy and at a moment's notice. A more graceful explanation, offered of course by scientists of the feminine gender, is that the richer endowment of traits making for social intelligence in women must in the nature of things cluster around the finest of all human instincts, mother love.

Social intelligence is the life of all five senses. Speech, while the ordinary vehicle of thought, is an excellent device for concealing one's true meaning. In order to move people, we must get close to their innermost being; and a defensive reaction is quite natural. Facial expression, the oldest of all languages, is often more sure than speech, especially when one practices attention to what is going on "behind the eyes." There is a delicacy about disclosing our most intimate thoughts and feelings which bids us ever to deny even their existence; and it is these intimate, confidential thoughts and feelings which are most often the mainsprings of our actions.

JOHN A. H. KEITH,
State Superintendent of Public Education,
Harrisburg, Pa.
(See Page 122.)

Technics Which Help

The possessor of excellent human managerial qualities will generally make his own place in the world. There are technics which will help him do this. An individual, like an institution, must perpetuate his own tradition. Sociologists have noted the increasing tendency toward passivity of a public more and more expecting to be persuaded, bullied, or intrigued into the acceptance of the kinds of clothing it wears, the food it eats, or the public servants it accepts. Without advertising, our whole industrial and commercial structures would collapse. The superintendent, reluctantly but of necessity, must convince the public that both he and his schools are justifying their support. A drawback is, that some superintendents, all thunder and no lightning, are perpetrating as well as perpetuating themselves at the expense of the man who spends his time serving little children. By advertising their systems heavily, developing friendships in strategic locations, and working up a heavy line of personal salesmanship, they secure and hold positions far better men cannot touch.

If these downtrodden "better men" would balance their education, drop their academic aloofness, and study human beings more, this evil would largely disappear. There is no more excuse for the superintendent, a sociological engineer, to be ignorant of the nature of his human material and methods of manipulating it, than for the bridge designer or the architect to be ignorant of stresses, tensions, and materials. There is a practical philosophy back of the superintendent who is personally acquainted with every member of his senior high-school classes; who is around at assembly time and who leaves a wholesome impression which is remembered; who has State or national office in professional or other organizations; whose signature is not infrequently seen, and whose thoughts, attitudes, and stories are broadcast among his fellows. The superintendent who keeps a "jump ahead of the game" will utilize all the mechanical extensions of human activities, the automobile, with its greater cruising radius and mobility, packs into a little time a great deal of fruitful activity; the mimeograph multiplies his words a thousand times; modern office equipment saves human life and strength, makes memory certain, and increases power.

Fears Which Obsess

The superintendent must preserve his individuality against the continual fears which obsess him. He was born in the shadows of fears always accompanying the more sordid phases of his parents' struggle for existence. An excess of fears offers a peculiar danger to the superintendent in the development of an effective personality. The economic fears of his parents, their religious fears, their fear of the mores, traditions, superstitions, and customs of their simple and rather harsh environment long ago left their mark upon him. His own struggle through college and upward through his modest career, never very far from the sterner realities of life, have developed defense mechanisms against certain activities, and customs of polite social circles. The continual thwartings encountered in dealing with a thousand men of a thousand minds, while learning his profession at the same time he was practicing it, leads often to gnawing, ingrowing repressions which frequently break out in rather childish stubbornness, "sticking to principle," sudden spleen, and all the problems of mental hygiene occasioned by introversion, or repression of instinctive traits demanding expression.

Finally, the superintendent as an individual must combat the tendency to provincialism so easily acquired in small towns and cities. His profession by definition should be the very antithesis of provincialism. And many an ambitious boy with visions of complete self-expression, who has begun to feel the freedom of attainment in his earlier positions, begins to feel panicky, if he is alert, in his forties. Is it possible that his earlier struggles to shake off the fetters of youth and reach his castles in Spain will end in a drab, dust-covered schoolhouse a half mile from Main Street? It will not supply all, but, with the dreams of hope, it will tide him through to the wisdom of old age to keep his mind open to the currents of thought which sweep over the country by such means as attendance on the N.E.A.; liberality in purchasing periodicals, and attention to his library; a motor tour across the continent; attendance at a larger summer school in one of the greater cities; visits to other school systems; and a conscientious effort to cultivate the companionship of a very few really well read and cultured people of his town.

THE SUPERINTENDENT'S SOCIAL ENVIRONMENT

What is the nature of the social environment in which the superintendent is placed? He lives in a town of from 5,000 to 10,000, if we wish a type for clear thinking. His town is shot through and through with group ties of every conceivable sort. He lives in an age of group action. In a recent well-known directory of national organizations, over 750 are listed, most of which have a potential field in the average small city, and many of which have already taken root. They range in interests from those which are institutionalized, as the church, the school, and the governmental units, to those of more specific appeal, such as: The Military Order of the Cootie, The Hay-Fever Association, Tall Cedars of Lebanon of the United States of America, Association Against the Prohibition Amendment, Inc., and a host of others.

In the local situation, public workers are wont to exclaim: "Our town is clubbed to death! From any more clubs deliver us!" It seems any healthy citizen with an idea to "put across" proceeds to jump in and organize his fellow citizens. In preparing children for life the junior high school functions one hundred per cent with its dozen or so school clubs.

One of the most important jobs the superintendent as sociological engineer will have, will be to locate and weigh as factors the important and influential groups of his city. On the improbable assumption that the relative proportions of certain leading organized groups in the United States as a whole are the proportions found in our average city, one may construct a

most suggestive mental picture of certain phases of the social group composition. It will be an interesting and profitable exercise for the superintendent to compare his own city with our "average" one, and ask himself just how well he harmonizes with his people, and how many of them he can control wholly or in part.

A Typical Town

Our town, which we will call Apogee, is the median in size of towns and cities in the United States over 2,500 in population; it boasts approximately 5,000 souls. Of the 5,000 men, women and children in the city, 2,179 are members of some church. There are 1,344 Protestants and 835 Roman Catholics. Of the Protestant churches, these numbers hold: Methodist, 379; Baptist, 369; Presbyterian, 113; Lutheran bodies, 113; Disciples of Christ, 62; Protestant Episcopal, 51; Congregational, 39. Many other denominations are represented in smaller numbers. There are nine ministers who live in town, and several others who visit from the larger cities. About 900 children are on the Sunday school rolls, but attendance is exceedingly irregular, and the teachers as a whole are much below the average of the public school staff, in training and ability.

The fraternal and secret orders in Apogee have the following members in good standing: Masonic fraternity, 122, including 34 Royal Arch Masons; Independent Order of Odd Fellows, 103; Ku Klux Klan, unknown, but substantial; Knights of Pythias, 39; Benevolent and Protective Order of Elks, 38; Knights of Columbus, 36; Modern Woodmen of the World, 49; Loyal Order of Moose, 28; Woodmen of the World, 22; Improved Order of Red Men, 22; Maccabees, 9. There are numerous other orders varying in size, some quite substantial. The Y. M.C.A. has 33 members, not including 11 boys.

It would be meaningless to give the proportions of other organizations, as they function in different size cities. There are numerous ones. The Chamber of Commerce, Kiwanis, Rotary, Exchange, Lions, Luncheon Clubs, and others; the Country Club, Alumnae Association, Parent-Teacher Association, labor unions, numerous women's social and other organizations such as bridge, music, art, and literary clubs, a hierarchy of young people's church organizations, and other minor religious organizations.

The superintendent will have to decide for himself as to the relative importance and influence of each of these organizations. Some are mighty, some are innocuous; but whatever the superintendent decides about them, he will do well to keep to himself.

But some of the most effective of human ties are strands which are never woven into the cable of formal organized group control. The quiet understanding among men who control the wealth of the town; the attitudes openly expressed by the leading citizens; agreements among politicians; private friendships; blood relationships; after-lodge caucuses; the quiet word passed from the advertiser to the editor, from the mayor or council to the board; these forces and similar ones rule the world.

Progress and Its Consequences

Progressive or reform movements initiated by well-intentioned leaders have a most disconcerting way of affecting in unforeseen ways other portions of the highly integrated and sensitive social body. Each problem solved stirs up a horde of others, some of which are the last in the world the reformer desires to have crop up. You never can tell what an apparently simple and innocent reform will do for you. But every superintendent worth his salt has an everlasting urge to try out variations from the normal scheme of things, which he at least deems to be progress. When he attempts to crowd into one brief period large developments, he stirs up at once numerous developmental hazards, and must encompass the painful death of many old ideas. On the other hand, to select a narrow variation and push it timidly never advances in any substantial way the progress of a school system. The secret of good management seems to be to select those variations for which a community is ripe, and push them with all the vigor of yourself and supporters you can muster. A period of preparation, during which the matter is talked over, and digested by public opinion, and during which the superintendent advances facts rather than directly argues, quite often modifies the original formulation, and it may then be pushed home. Not always is public education necessary; a large degree of public indifference and inertia often means that the superintendent may be able to work far more effectively through a few influential men than through the masses.

Social controls work most effectively at short range. Their effectiveness varies inversely as the square of the distance. People must see or imagine they see the rewards, penalties, or other consequences. People like to have evidences of extreme age in old school buildings before they authorize the construction of new buildings. They like to mourn awhile over the loss of all their best teachers, before they raise salaries. It is extremely difficult to get the average school board to provide future sites for school buildings. The familiar principle of economics, "A dollar today is worth two ten years from now," holds. A doubtful citizen is convinced of the needs of little children if he can be induced to visit their schoolhouse or home and see for himself. The best school surveys in the United States are not the huge tomes of descriptive matter, but are the most skillful presentations of the relationships of cause and effect, plus plausible answers to the question, "What are you going to do about it?" Facts and recommendations are specific. When individuals and groups deal with far-away confreres, instincts no longer function, and relationships become impersonal. The school takes up its function here, and strives to mitigate long-range sinning by securing virtues based not on instinct, but on an appreciation of the vaster consequences which instructed reason discerns.

CONTROLLING THE GROUP

What are the agencies of social control which the superintendent may use? His ability to utilize each of the following forces is a good measure of his capacity to get results in public work:

1. Law, e. g., state school codes, rules and regulations having the force of law; local schoolboard rules and regulations, and so on. The superintendent must know all such that are pertinent to his problem, or have convenient access to them.

2. Religion. The days of the preacher-teacher, while now over, are suggestive of close ties between church and school. The feeling of brotherhood among church members has many ramifications. The superintendent can never safely depart from an attitude of fair play.

3. Education. The children of today are the rulers of the city tomorrow. The superintendent has convenient to hand a powerful force for influencing his city; the reports of satisfied children, or of dissatisfied children of their needs, and demonstrations of their achievements, offer opportunities.

4. Custom, tradition, and conventions. "The way we did it last year" sounds safe and solid to most people.

5. Public opinion. This is the most powerful of all social agencies of control. It is most effective when the public is already interested in the schools. Psychologically, public opinion is formed like an ordinary piece of learning. A man hears, reads, or observes tangible evidence of what leads to an opinion. He tries his opinion out on his fellows. Their approval or disapproval and his constant reiteration of confirmed opinions decides the matter definitely in his mind. The process is repeated ad lib. in other minds.

6. Personality, elsewhere discussed.

7. Art. Occasionally used. The church is far ahead of the schools in using art to forward its ends.

8. Ceremony and manners. Men have a universal desire for lodge buttons, robes, and offices; there must be ceremony at christening, marriage, and death. The church excels the schools in exercising these appeals. The schools are represented by imposing commencements, school customs, and traditions, the dignity of the schoolmaster, and, very infrequently, impressive superintendent's offices and school buildings.

Getting Into Local Activities

The necessity is clear for the superintendent to enter into the activities of as many of the civic and social organizations as he can spare time and money for, if he is to get access to the throttles of many of these forms of socially generated and directed energy. The typical superintendent belongs to six or eight of the leading ones. One clever mid-western superintendent sees to it that his system is represented widely in the effective organizations of the city by one or another of his most loyal, informed, and socially effective principals and teachers. There isn't much going on which the superintendent doesn't know, and there has been a surprising number of movements launched for the schools which have borne fruit.

Your born executive can swallow rather large doses of intellectual asininity; the rough and tumble of contact with real humanity is not so distasteful as to some of his brethren who are sheltered behind academic walls, and whose most fetching remarks concern the moron population of the United States. He reasons that if one is to treat a patient, he might just as well keep his finger on its pulse, and have, at least, a cheerful bedside manner. And as for the intellectual side of it, there is a just suspicion that he who tries to damn a whole people as simple-minded, has set his median at the upper extreme of his normal curve, an extremely unintellectual thing to do. Standards, after all, are set up by the minds and hearts of men, and there is no divinity in one mind over another; the mental adjustments to environment possible in the brilliant mind may be unnecessary and undesirable in the mind of a member of the great majority. And so your born executive reasons on and goes cheerfully ahead, trying to raise standards of thinking, while the poorer stocks of the world continue to populate it with people who cannot think, and the better stocks cut down on their offspring. And in a world where one joke is worth two arguments, your executive becomes a first-class raconteur.

Some Pitfalls

There are numerous pitfalls in the use of social controls. To the young schoolman it seems a sore trial not to be permitted to disport himself in free America's recurring religious, political, and similar battles. He is afraid his style as an intellectual he-man is being cramped, and if he is of a sporting disposition, he generally takes a chance; and generally lives to regret it. Most schoolmen play the game of politician as amateurs, and more often they lose than win. They are not in a position to use the rewards, punishments, or weapons of their opponents. The side they can conscientiously take generally puts them in the minority. Even if they win a conflict, they leave a string of enemies who rarely forget; and every hurt man has friends. The plain citizen looks askance at the man who, presiding over

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How to Judge Good Ventilation

Thomas D. Wood, M.D., and Ethel M. Hendriksen

The day is past when professional and technical experts make a secret of their arts. The physician is benefited by the intelligent cooperation of the patient who understands something about hygiene. The electrician profits by the knowledge the modern housewife has of electrical appliances. The ventilating engineer with the right sort of equipment has nothing to fear from informed public opinion. It should not be difficult for any school-board member, no matter what his profession, to evaluate a ventilation system, provided he sees it in operation rather than accepts it upon verbal or printed description. Ventilation should cease to be so complicated and mysterious.

But the elaborate and diagrammatic descriptions of various kinds of mechanical ventilation equipment do not elucidate the subject. They only serve to make it more complicated. What the lay person who is expected to pass judgment upon the type of ventilation to be installed in a given school needs, is to know a few scientific principles. The physician can't give the patient a medical course but he can tell him why it is necessary for him to stay in bed so long as he has a fever, or why he should drink enough water. Facts about personal hygiene are in possession of every intelligent person today and the new hygiene of fresh air should be a part of this common knowledge.

The writer of the "Pros and Cons of School Ventilation" in the January Issue of the SCHOOL BOARD JOURNAL defined ventilation as a process of producing healthful air and then he went on to say that the ventilating engineers do not know what constitutes healthful air for the reason that this is a medical subject and the physicians have not yet decided what is healthful air.

It is chiefly because physicians have decided what healthful air is that the ventilating engineers are on the defensive. Most mechanical systems of ventilation are not furnishing healthful air. And if they are capable of doing so it is at unnecessary expense for cumbersome equipment, which is no better than the simple opening of windows and the provision of a few ducts near the ceiling.

What Dr. Leonard Hill of the Institute for Medical Research in London and Dr. George T. Palmer of the New York State Commission on Ventilation have pointed out, has been confirmed by scientific workers in other countries as well. These experimenters declare that air in order to be fresh and healthful must be of moderate temperature, no higher than 68° F.; it must be in gentle motion rather than still; moderately moist rather than dry, and slightly variable in respect to all of these three conditions. In other words, what medical men declare to be healthful air is just the kind of air that most closely resembles that of the outdoors on an ideal day in June. We want the delicious coolness, the gentle zephyr, the soothing moisture; and we like the stimulation which the slight change in temperature, movement, and moisture brings to the skin.

It is true that we demand, also, that the air be reasonably free from dust and that it smell fresh and clean. But one hesitates to emphasize clean air because the ventilating engineers have made such an error in this direction. Many of them have the conception of air as chemically pure rather than air that refreshes.

Since carbon dioxide as the result of scientific studies has been so definitely backed into a corner, some engineers have ceased to mention it as the harmful element in the air of occupied rooms. But when they talk about "a basis of 30 cubic feet of fresh air per minute per pupil" they are harking back to the discredited carbon-dioxide theory and the belief that a certain number of air changes per hour are necessary to dilute the carbon dioxide in the air of the occupied room in order to render this carbon dioxide harmless.

It is this 30-cubic-feet-per-minute-per-pupil fetish that keeps many school boards from deciding in favor of the more scientific methods of ventilation. For certain states have either a law or a ruling making this standard legal and compulsory. The engineers then remind the school boards that in order to conform to this law, mechanical equipment must be used. Never was a more mistaken piece of school legislation enacted.

An engineer who takes to himself the credit of having advanced this 30-cubic-feet-per-minute standard should pause to reflect on how many school children are deprived of fresh air by this means. Professor C.-E. A. Winslow in his article in the SCHOOL BOARD JOURNAL, June, 1925, described the fallacy of this standard. He related the experiments of the New York State Commission on Ventilation which proved that in order to supply this volume of air it was necessary to heat the incoming air to a temperature that is dangerous to health in order to avoid a chilling draft. He says in his article: "After a most careful study of social and economic conditions, and of all other possible factors bearing on the case, there seemed to be no escape from the conclusion that the supply of 30 cubic feet of air per minute per pupil with its concomitant overheating is not only needless but positively harmful to the health of school children."

Professor Winslow goes into the cost of mechanical ventilation and shows that the method of taking a large quantity of air into a plenum air chamber and heating it to a high temperature and then delivering it to schoolrooms is not only of great harm to health but it is tremendously costly.

Professor John R. McLure in his investigation of the Ventilation of School Buildings[1] found that because of the cost of operation many systems for mechanical ventilation were idle. He declared that in New York City alone there are millions of dollars of idle ventilating equipment.

Now these cumbersome and costly mechanical systems of ventilation are unnecessary. The New York State Commission on Ventilation discovered a better way to ventilate schoolrooms. The window gravity system is simple to install and easy to operate. It gives satisfactory ventilation. Such prominent school architects as the Frank Irving Cooper Corporation of Boston are designing window-gravity ventilation for many schools in the east. William E. Watt of Chicago has put the entire school system of Evanston, Illinois, on a window-gravity system. The first experiments with gravity ventilation were made in Fairfield, Connecticut, by the late Samuel H. Wheeler. Fairfield has used this service since 1913 in all of its new school buildings and is highly satisfied with it. The new Thomas Snell Weaver High School of Hartford, Connecticut, one of the largest schools in the country, uses the gravity system.

The Wheeler system of window-gravity ventilation has been endorsed by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. The essentials of this system as described by the Joint Committee are as follows:

A. Radiators, long enough to extend the full width of the windows through which the air supply comes, must be placed beneath the windows. They may be equipped with either automatic or hand control, though the Commission recommends the provision of hand control even where automatic control is installed. Metal radiator shields should be used to protect pupils near the radiators from the heat. (It is presupposed that vapor or vacuum steam heat is used.)

B. Deflecting boards should be placed at the bottom of the windows. Windows used in this system should open from the bottom and not from the top.

C. Window shades should be attached firmly to the window frame. Two shades are preferable, attached midway between the top and bottom—one to be pulled upward and the other downward. They should be so arranged as to prevent any movement of the shades due to the air flow.

D. Exhaust ducts having a total area of not less than eight square feet for a forty-pupil room should be provided in the wall opposite the windows. These openings should be provided with dampers which can be adjusted to suit weather conditions. The exhaust ducts should be carried up through the interior of the building, so as to avoid chilling, and the tendency to back drafts should be further reduced by placing an aspirating cowl at the opening on the roof and perhaps by placing heating coils in the exhaust duct.

E. The schoolroom should not be overcrowded. With this method of ventilation the commission's work resulted successfully where there was a cubic space allowance of 250 cubic feet for each second-grade child and 310 cubic feet for each sixth-grade child.

F. A large thermometer with a danger signal pointed at 68° F. should occupy a prominent place, for the teacher's convenient observance.

One factor is of paramount importance in connection with the success of window-gravity ventilation or of any other system and that is adequate supervision. No system of ventilation can be entirely automatic. It must be the task of some one or more intelligent, interested persons. Too often the supervision is left to a too-busy assistant principal.

Schools must realize that in the use of the window-gravity system an enormous saving in initial expense is effected as well as the usual expense of operation common to mechanical systems, and that, even when the cost of supervision is considered, the gravity system is far less expensive than the least expensive of the mechanical systems.

It is an excellent practice for each schoolroom to keep a temperature chart and to record the temperature hourly. Pupils where old enough, should be taught to cooperate in the care of the schoolroom by keeping the temperature records and adjusting windows and ducts as necessary to maintain the right temperature and provide good air.

When the members of the school board are called upon to judge a ventilating system let them discover by visits to schools where the systems under consideration are in use. Let them ask:

1. What is the average temperature of the rooms in this school throughout the winter? (If the average is around 68° F. the system probably is satisfactory or at least has decided merit.)

2. Is the air in the school fresh, moving, alive, stimulating, or is it the reverse?

3. What does the system cost to install and what does it cost to operate? (Of two systems,

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[1]McLure, John R. Ventilation of School Buildings. Bureau of Publications, Teachers' College, Columbia University, 1925.

Salaries or Wages?

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The superintendent of a small city system was presenting to his board of education the proposition of a single-salary schedule. He had carefully established his case and recommended the adoption of the schedule after outlining all of its merits. With the conviction that he had made the proposition perfectly clear, he turned to the members of the board for their reaction. To his consternation one of the members—newly elected—said: "I can't see the sense of having *any* salary schedule. Why not engage teachers as we do the clerks down in my office and pay whatever is necessary for the type of service we want?" This unexpected response made necessary a restatement of the case and a week or two of personal work with members of the board. The result, since it was a progressive school community, was the adoption of the schedule as originally proposed.

We are forced to admit that there is some justification for the attitude taken by the above layman. Why should teachers expect uniform remuneration when members of other professions and wage earners are paid on the basis of supply and demand and quality of service? Why should members of the teaching profession ally themselves with the labor unions, at least in spirit, in setting up demands for their services? To the lay mind these questions are perfectly fair, and the point of view is even reflected in the thinking of some school administrators.

An answer to these questions requires the development of a bit of administrative philosophy, having in mind the best interests of the school while we consider the welfare of its employees.

Commercial Employment and Advance

To begin with, a worker in any field, when entering the employ of an organization, is entitled to know the possible opportunities which the new job presents, assuming, of course, that he fits into the organization and delivers the expected service. In the commercial field he is usually selected with great care by a personnel expert and is given an opportunity to adjust himself to the type of activity best suited to his training and natural ability. Usually promotion comes as a result of commendable service. School administrators might profit by emulating the technic employed by their commercial brethren in this respect. Members of the staff should be selected with the greatest of care and should be given opportunity, under *helpful supervision*, to fit into the organization where they can render a maximum of service. When, and as, such adjustment is made there should be official recognition on the part of the employing body.

In order to raise the teacher out of the wage-earning class, three items are of prime importance; first, she should be adequately trained and have the professional point of view; second, she should be guaranteed steady employment; third, provision should be made for adequate compensation for her services. On the first point educational leaders must continually be at work, raising standards and shaping public opinion so that there will be an increasing demand for the expert. It is discouraging to hear of cases where a local school official insists on the employment of untrained, inexperienced teachers to supplant successful incumbents for a saving of ten dollars per month. Concerning point two above, qualified teachers who are rendering satisfactory service should be made to feel that their employment is at least as permanent as that of workers in the commercial field. This can be done by passing permanent tenure laws, by lengthening terms of contract,

or by developing permanency through careful selection and a minimum turnover. The third point, provision for adequate compensation, takes into account the consideration of an adequate living wage for a twelve months' period. Salaries of school teachers are, for the most part, their only means of support. There will be a sense of permanency when the annual salary is paid in twelve monthly installments. Boards of education, too, should think of the teacher as a regular, permanent employee, working on a twelve months' basis, with time off between school terms for necessary relaxation and professional advancement.

Criteria for Salary Schedules

The salary schedule idea is perfectly compatible with the best business practice in the fields of commerce and industry. Wherever large groups of workers are employed, there is usually a salary or wage scale. In the public-school field the salary schedule is an essential, administrative device whose satisfactory operation depends upon the soundness with which it is constructed and the intelligence with which it is operated. The four criteria for the classification of a teacher in the average salary schedule are (1) training, (2) experience, (3) type of instruction, and (4) sex. The modern philosophy of education would eliminate the last two on the theory that each step in the process of educating a child is as important as any other and that, other things being equal, an expert in the primary grades is worth as much as an expert in the science department of the high school. In this connection Mr. Winslow, in a recent article in the SCHOOL BOARD JOURNAL, gives a point of view that challenges our attention. He says: "Pupils of a low elementary grade ought to have teachers as good in respect to character, personal alertness, and familiarity with technic as pupils of the higher grades, but *the same degree of scholarly attainment is not necessary.*"[1] Further on in the same article he says: "In a certain city recently, of a large number of high-school graduates who applied for admission through the training schools, fewer than one third were needed and could be accepted. In the same city the teachers have been conducting a campaign for an increase in salaries. Many of them should receive an increase, but what logical or just ground can there be for an increase for all, when many of them could be replaced by candidates of equal ability, who would gladly accept even lower salaries than are now provided?" If this is a true statement of the conditions in the city under discussion, it is an indication that the selection and placing of the teaching staff has been poorly managed.

The Single-Salary Schedule

Throughout the country the single-salary schedule seems to be gaining in favor. For the most part classification is based on training and experience, and advancement on the basis of length of service or increased preparation. This scheme has a tendency to make the teacher a "job holder" since salary increments are automatic. To be most successful, promotion should be based on a satisfactory merit system wherein the superintendent and his administrative assistants determine whether the teacher has earned the increase through satisfactory performance. The board of education, moreover, should be free to grant double-step increases for meritorious service and change the schedule whenever conditions warrant.

When the writer was developing a salary schedule two years ago[2] he submitted the tentative draft to some fifty superintendents and experts in educational administration. There was general agreement that the single-salary schedule is correct in principle. Said one superintendent: "I am convinced that of all the silly things we have been guilty of in the past, the practice of undermining the very foundation of our teaching organization through a system of discriminating against the teachers in the early years, carries off the honors." And another: "There is no reason why a fine teacher in the elementary grades should try to secure work in the high school, where perhaps her results will be inferior, merely for the purpose of obtaining a bigger salary."

On the point of promotion being subject to meritorious service as determined by the administrative staff, there was agreement in principle, but a question was raised as to its successful applicability. A specialist in educational administration wrote: "I liked your statement that increases are not wholly automatic but that teachers must show in addition to educational qualifications professional achievement as a basis for the increase provided." But a superintendent in a large city system is skeptical about the administration of such a scheme: "I note that you are adopting a merit system. I have never had the courage to undertake such a program. Theoretically, there are many arguments in favor of it, but practically it seems to present many very difficult problems." Another superintendent agreed with this point of view: "I believe this principle is right, since it recognizes merit as well as extent of preparation and experience. However, as your system grows, there will probably be greater difficulty in securing a rating which the superintendent will feel is entirely satisfactory. This depends very largely on the character of the supervisory staff with which the superintendent is surrounded." Here again we may profit by observing the operation of the personnel department of a large commercial or industrial concern. There turnover is measured in terms of dollars and cents and everything possible is done to maintain efficiency by rewarding conscientious performance.

Better Leadership Needed

Unquestionably, if we are to professionalize the work of teaching, we must make it stable through administrative leadership. The field must be made attractive to young people with ability who are willing to prepare themselves for the work. Assuming adequate preparation and individual ability, the teacher demonstrates her worth, fully confident that there will be social and financial recognition. Until this situation obtains, the job of teaching will of necessity be classed with that of the average wage earner. It is the responsibility of school administrators and boards of education to make the teaching activity a worth-while, permanent occupation. Furthermore, teacher-training institutions should begin seriously to consider their responsibility in placing their stamp of ap-

[1] I. O. Winslow, The American School Board Journal, Sept., 1926, p. 40.

[2] The American School Board Journal, August, 1926, p. 38.

(Concluded on Page 161)

A Determination of the Cost of Collecting Taxes for Schools

A. V. Overn, Principal of the High School, Hutchinson, Minn.

In Freeborn, McLeod, and Meeker Counties, Minnesota, the cost of collecting the school taxes, including all the schools' share of the cost of assessment, seems economical. The writer has completed a study based on an examination of the official records and accounts in the offices of the county auditors and county treasurers of the three counties mentioned. The following technic was employed: First, the costs were determined for maintaining agencies which concerned themselves in any way with the procedure of school-tax collection; second, reasonable figures were sought to represent the share of the cost of these agencies directly chargeable to the collection of all taxes; third, the cost of collecting school taxes was obtained as a share of the cost of collecting taxes, by prorating the amount of school taxes to the amount of all taxes collected. All data was obtained for a period of four years, from 1921 to 1924, inclusive, in order to include one complete cycle of the election terms of county officials who had work to do concerning the collection of taxes. Four years also included an even number of assessment years for real estate and personal property. The data is, therefore, as comprehensive for the three counties studied as could be desired.

The Procedure in Collecting Taxes

The procedure used in Minnesota for the collection of all taxes represents the extremely centralized type. The taxpayer pays every kind of direct taxes, which are based on the valuation of his property, at the same time at the office of his county treasurer. The times set for these tax payments are before the first days of March, June and November, respectively, of each year. The county auditor in each county figures all the rates of taxation for all purposes, such as for the use of the township, village, city, school district, county and state, before any of these taxes are paid. Then he combines all these rates for each taxpayer to determine what total tax he is required to pay. Personal property taxes are separated from other taxes, to be paid before the first of March, and real estate taxes are divided so that one half are required before June first and the other half before November first. Thus, it is difficult to separate the actual work required and the expense entailed for the collection of school taxes in Minnesota from the work and expense employed in the collection of other taxes. As a result of this difficulty, the practice has grown up of charging the cost of collection of all taxes, whether for school or other purposes, to the general county expenses. The school is given all the money which its board levies, therefore, without any deductions except what is deducted for delinquent taxes covering the year for which the levy has been made.

Costs of Collecting Taxes

Table I shows the costs of maintaining all the agencies concerned with the collection of taxes in the three counties for a period of four years, as an annual average.

Table I.—Costs of Maintaining All Agencies Concerned With the Collection of Taxes. Average for Four Years

Classification of Costs[1]	Freeborn County	McLeod County	Meeker County
Salaries and Fees			
Auditor's Office	$ 5,917	$ 4,558	$ 4,803
Treasurer's Office	4,967	3,172	3,683
Assessors	5,395	3,395	3,309
Board of Audit	121	77	222
Board of Equalization	56	44	54
Office Expenses			
Auditor's Office	1,246	649	866
Treasurer's Office	1,246	649	800
Election Expenses	227	162	155
Operation and Maintenance[2]	1,679	821	553
Totals Each County	$20,854	$13,527	$14,445

[1]Calculated to the nearest dollar.
[2]Of the court house, prorated to the offices of treasurer and auditor.

From Table I it appears that the average yearly cost of maintaining these agencies ranges from $13,527 to $20,854, the auditor's, treasurer's, and assessor's costs being greatest.

The second step in the method was to analyze the duties of these officials. Many duties other than the collection of taxes are associated with the offices of auditor and treasurer in Minnesota counties. A complete list of all the general duties of these officers was drawn up and presented for a careful estimate of the proportion of the total time actually used in their offices in performing services associated with tax collection. A fifty per cent division appeared to be reasonably fair. Hence, this percentage of the costs of maintaining the offices of treasurer and auditor, of electing the auditor and treasurer, and of housing these two officials in the court house, was charged to the cost of collecting taxes. The costs of maintaining the assessors, the board of audit, and the board of equalization, were charged *in full* against the collection of taxes. Table II shows the resulting divisions of cost allocated to the collection of all taxes.

Table II.—Cost of Collecting All Taxes. Actual Tax-Collection Cost is Prorated as a Percentage of All Work Done by Taxing Agencies. Average for Four Years

Classification of Costs	Freeborn County	McLeod County	Meeker County
Salaries[1]	$ 5,619	$ 3,986	$ 4,519
Office Expenses[2]	1,246	649	833
Operation and Maintenance[2]	842	410	291
Election Expenditure[2]	114	81	77
Assessment Expenditure[3]	5,395	3,395	3,309
Totals for Counties	$13,216	$ 8,521	$ 9,029

The total annual costs of collecting taxes, four-year average, vary from $8,603 in McLeod county to $13,241 in Freeborn county. Salaries of assessors and salaries of all other officials involved are almost identical in Freeborn county, only five hundred dollars apart in McLeod county, and twelve hundred dollars apart in Meeker county. The cost of assessment is the most significant single item, being approximately forty per cent of the total cost when averaged for the three counties.

Basis for Apportioning Cost of Collection v. School Revenue

The third step in method was to find a just basis for apportioning a share of the cost of collecting all taxes in each county to school-tax collection. Since school taxes are paid at the same time as other taxes; since they are levied on identical assessments with other taxes; and since they are intimately associated with taxes levied for other purposes at every point in the process of collection, it was thought reasonable to calculate first the proportion that school taxes were of all taxes for the four years, and then to use the percentage thus deduced to calculate the proportionate cost of collection for school revenue. Table III classifies the taxes collected in the three counties for the four years studied.

Table III.—Amount of All Taxes Collected. Four-Year Average

Classification of Taxes	Freeborn County	McLeod County	Mecker County
Taxes, Assessments, Penalties	$1,124,170	$631,499	$606,073
Licenses	1,058	1,527	1,394
Mortgage and Registry	8,493	2,104	2,932
Total Taxes Collected	$1,133,721	$635,130	$610,399

Mortgage and registry taxes are distributed on the basis of one third to the school districts in the county. The total taxes collected vary from $610,399 in Meeker county to $1,133,721 in Freeborn county.

[1]Estimate based on the judgment of the auditors that fifty per cent of the time in the auditor's and treasurer's offices is devoted to tax-collection business. The boards of audit and equalization are figured in full.
[2]Estimated that fifty per cent of the total applicable to treasurer and auditor went for tax collection.
[3]In full.

Table IV.—Total Moneys Designated for School Purposes. Four-Year Average

Classification of Taxes	Freeborn County	McLeod County	Meeker County
One Mill and Special Tax	$ 360,470	$194,001	$183,250
State Loans and Interest	22,083	18,076	9,450
State School Fund[1]	24,139	22,260	17,878
For County Superintendent's Office	4,246	2,640	2,092
One-third of Mortgage and Registry Tax	2,831	701	977
Total School Money Levied	$ 413,769	$237,678	$213,647

Table IV analyzes the taxes raised for school purposes in the three counties. School taxes in this study include the one-mill tax required by law of all school districts in Minnesota, the special tax for maintenance levied by the local school districts according to their current needs, the debt tax levied to pay interest and principal on money borrowed from the state school endowment, the money levied as the contribution of the county to state aid, the money paid out of the general funds of the county for the support of the county-superintendent's office, and one third of the mortgage and registry tax, which goes to the school districts.

In the three counties about 36 per cent of the taxes collected are for school purposes and about 55 per cent are for other local purposes. There is little difference in the three counties in the percentages of the total taxes used for school purposes. The average is 36.3 per cent. Table V shows the final determination of the costs of school-tax collection in the three counties as an average for four years, and distributes it per dollar collected and per pupil enrolled in school.

Table V.—Cost of School-Tax Collection in Three Minnesota Counties for Each Dollar Collected and for Each Pupil Enrolled. Average for Four Years

Items	Freeborn County	McLeod County	Meeker County
Cost of Collecting All Taxes	$13,216	$ 8,521	$ 9,029
Per Cent School Taxes Are of All Taxes Collected	36.5	37.4	35.0
Cost of Collecting School Taxes	4,824	3,187	3,160
Cost Per Dollar Collected	.0117	.0134	.0148
Cost Per Pupil Enrolled.	.80	.747	.881

The cost of collecting school taxes, based on the percentage of all taxes collected, is shown to be $4,824, $3,187, and $3,160, respectively, in Freeborn, McLeod, and Meeker counties. The average for the three counties is .0133 cents for each dollar collected, almost identical with the cost found for McLeod county; and .809 cents per pupil enrolled in school, almost identical with the cost found for Freeborn county. Such striking uniformity in the costs of collection in the three counties is noteworthy. It suggests that perhaps the cost, if determined for all counties in Minnesota, might be near these figures, since the school tax is collected by a similar procedure throughout the state.

It might not be far out of the way to accept the average cost per dollar collected, $0.0133, as a tentative index figure for the other agricultural counties in Minnesota, until such time as the costs of collecting the school taxes are determined more generally throughout the state.

Costs of Collection Under Centralized Procedure

The costs of collecting school taxes under the centralized type of procedure employed in Minnesota seem very reasonable. It is interesting, therefore, to note the wide differences in procedure of the centralized type, used in various other states, because these differences are bound to cause marked differences in the costs of school-tax collection. Minnesota, Wisconsin, and Michigan show extreme variations in methods used by law for collecting their school

[1]Includes here only money for insurance and retirement fund, teachers' colleges, and general school fund. Does not include university or state charities.

Diagram No. 1

Organization For The Collection Of School Taxes In Michigan

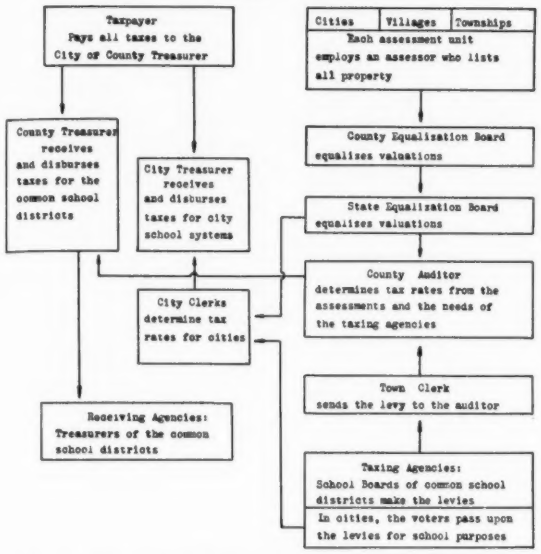

Taxpayer
Pays all taxes to the City or County Treasurer
County Treasurer receives and disburses taxes for the common school districts
City Treasurer receives and disburses taxes for city school systems
City Clerks determine tax rates for cities
Receiving Agencies: Treasurers of the common school districts
Cities | Villages | Townships
Each assessment unit employs an assessor who lists all property
County Equalization Board equalizes valuations
State Equalization Board equalizes valuations
County Auditor determines tax rates from the assessments and the needs of the taxing agencies
Town Clerk sends the levy to the auditor
Taxing Agencies: School Boards of common school districts make the levies
In cities, the voters pass upon the levies for school purposes

Diagram No. 3

Organization For The Collection Of School Taxes In Wisconsin

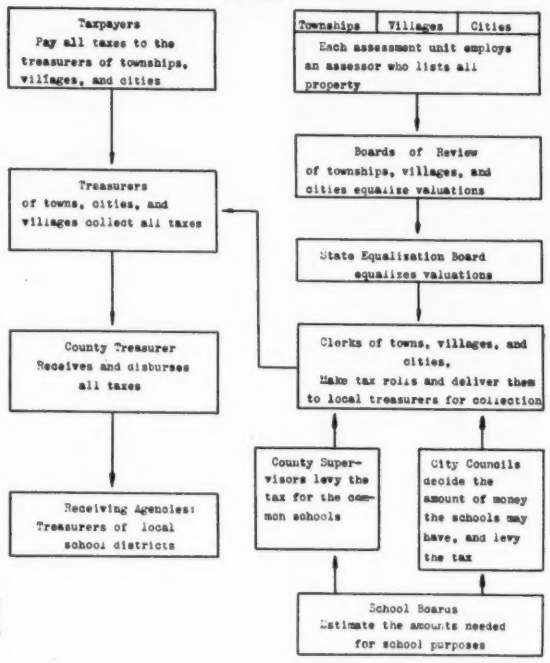
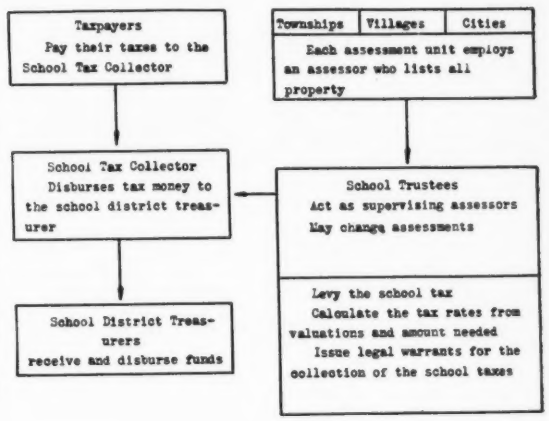

Taxpayers
Pay all taxes to the treasurers of townships, villages, and cities
Treasurers of towns, cities, and villages collect all taxes
County Treasurer Receives and disburses all taxes
Receiving Agencies: Treasurers of local school districts
Townships | Villages | Cities
Each assessment unit employs an assessor who lists all property
Boards of Review of townships, villages, and cities equalize valuations
State Equalization Board equalizes valuations
Clerks of towns, villages, and cities, Make tax rolls and deliver them to local treasurers for collection
County Supervisors levy the tax for the common schools
City Councils decide the amount of money the schools may have, and levy the tax
School Boards Estimate the amounts needed for school purposes

Diagram No. 4

Organization For The Collection Of School Taxes In New York


Taxpayers
Pay their taxes to the School Tax Collector
School Tax Collector Disburses tax money to the school district treasurer
School District Treasurers receive and disburse funds
Townships | Villages | Cities
Each assessment unit employs an assessor who lists all property
School Trustees
Act as supervising assessors
May change assessments
Levy the school tax
Calculate the tax rates from valuations and amount needed
Issue legal warrants for the collection of the school taxes

taxes; but all three states use the centralized type. All three states collect their school taxes at the same time and by the same agencies as are used in collecting all other taxes, and base their levies for schools upon the same property valuation as are used for levying other taxes. That is what is meant by the centralized type of method in tax collection. Diagrams 1, 2, and 3 illustrate graphically the methods used in each of these states.

Diagram No.2

Organization For The Collection Of All Taxes In Minnesota

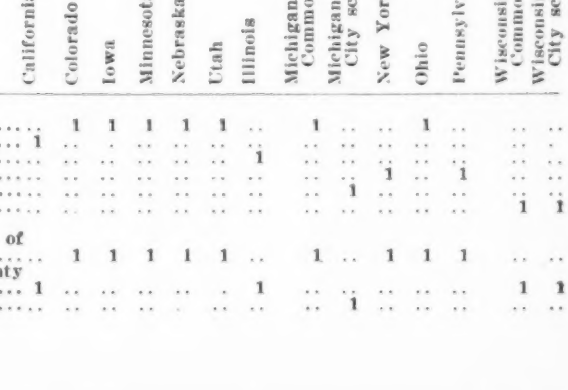
In Michigan, as will be seen from Diagram 1, the cities have a separate set of officials from the common-school districts for levying and collecting their taxes. The duplication of machinery involved in this practice cannot help being more expensive than the simple unification of all tax-collecting machinery in Minnesota. In Wisconsin, moreover, the dual system of control must needs affect the costs of collecting the school taxes adversely, because it multiplies the agencies that have as part of their duties the routine of levying and collecting taxes. There is a chance for political entanglements, also, inherent in the Wisconsin plan, which could conceivably increase the expense of maintaining the agencies that have tax-collection duties to perform in behalf of the schools.

The Costs of Decentralized Method

Nevertheless, if the centralized procedure of collection of taxes presents varied results in costs, then the decentralized procedure is much more expensive. The reader is here referred to Diagrams 4 and 5, New York and Pennsylvania, respectively. In the latter states, a complete set of machinery is maintained for levying and collecting the school taxes, in addition to the complete machinery used for the collection of other taxes. Only the assessments as determined by the regular assessors are used in Pennsylvania for the levying of the school taxes. In New York, even the assessments may be altered by the school trustees, who act as supervising assessors for determining the correct valuation upon which school taxes may be collected. In both states there are special school-tax collectors. These officials are paid a commission in Pennsylvania. When this procedure is contrasted with the absence of any such officials as special tax collectors in Minnesota, it becomes obvious that there must be a great difference in the costs in the two states.

Diagram No. 5

Organization For The Collection Of School Taxes In Pennsylvania


Taxpayers
Pay their school taxes to local school tax collectors
School Tax Collector collects school taxes
Receiving Agencies: Treasurers of local school districts
Valuations of assessable property, as determined for county and city purposes, are certified to the School Board by:
County Supervisors in townships and boroughs
Clerks of Cities
Taxing Agencies: School Boards levy taxes and certify them to their collectors

Just how great these differences may be in some instances may be inferred from an investigation which the writer made of the published report of the state superintendent's office at Harrisburg, for 1922-1923. This report gives

(Continued on Page 158)

Table VI.—A Comparison of the Procedures for Collecting the School Taxes in Twelve States: Six West and Six East of the Mississippi River. From Latest Laws

Types of Procedure in Assessing, Levying, and Making Tax Lists	West of Mississippi River							East of Mississippi River						
	California	Colorado	Iowa	Minnesota	Nebraska	Utah	Illinois	Michigan Common schools	Michigan City schools	New York	Ohio	Pennsylvania	Wisconsin Common schools	Wisconsin City schools
Assessment and equalization:														
Townships, villages, cities, employ assessors	..	1	1*	1	..	1	1	1	1	..	1	..	1	1
Each county employs an assessor	1†	1	..	..	..	1	..	..	..	..	..	..	..	..
School boards supervise or change assessments	..	..	..	..	..	..	..	..	..	1	..	..	..	..
County auditors are head assessors; hire assistants	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Levying agencies:														
School boards levy their taxes directly	..	1	1	1	..	1	1	..	1	1	1	..	..	
County supervisors levy school tax on advice of school boards	1	1‡	..	..	..	1	..	..	..	..	..	..	1	..
Voters pass on levies for city schools	..	..	..	..	..	..	..	..	1	..	..	..	..	..
City councils determine levies for city schools	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Determination of tax rates:														
County auditor calculates rates	1	1	1	1	1	1	1	1	..	..	1	..	..	..
City clerks calculate tax rates	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Clerks of townships, villages, and cities make rates	..	..	..	..	..	..	..	..	..	..	..	..	1	1
School boards calculate tax rates	..	..	..	..	..	..	..	..	..	1	..	1	..	..

*Minnesota pays daily wages of four dollars. †They are paid large salaries determined by state law. ‡The School Boards certify their needs to the county superintendent who forwards the estimates to the county supervisors.

Table VII.—A Comparison of the Procedures for Collecting the School Taxes in Twelve States: Six West and Six East of the Mississippi River. From Latest Laws.

Types of Procedure in Actual Collection and Disbursement of Funds	West of Mississippi River							East of Mississippi River						
	California	Colorado	Iowa	Minnesota	Nebraska	Utah	Illinois	Michigan Common schools	Michigan City schools	New York	Ohio	Pennsylvania	Wisconsin Common schools	Wisconsin City schools
Payment and Collection of Taxes:														
Taxpayers pay to county treasurers	..	1	1	1	1	1	..	1	..	..	1	..	..	..
Pay taxes to county tax collectors	1	..	.	..	..	..	..	..	..	..	..	..	..	.
Pay to collectors for townships, villages, cities	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Pay to school tax collector for each school district	..	..	..	..	..	..	..	..	..	1	..	1	..	..
Pay school tax to city treasurers	..	..	..	..	..	..	..	..	1	..	..	..	..	..
Pay to treasurers of townships, villages, cities	..	..	..	..	..	..	..	..	..	..	..	..	1	1
Disbursement of Funds:														
Schools' revenue is disbursed directly to treasurers of school districts	..	1	1	1	1	1	..	1	..	1	1	1	..	..
Collections are cleared through office of the county treasurer	1	..	..	..	..	.	1	..	..	..	..	..	1	1
City treasurers receive and disburse school funds	..	..	..	.	..	..	..	..	1	..	..	..	..	..

School Housekeeping

(Third Article)

M. S. Olsen, Director of Janitor-Engineer Training School,
Minneapolis Board of Education

THE MAINTENANCE OF FLOORS

It is not uncommon to find *oiled* classroom floors, *waxed* corridor floors, and *varnished* cooking-room floors—all in the same building. This, of course, makes satisfactory maintenance an impossibility for the janitor. The oil is carried on the shoes of the children to the waxed floors and the wax immediately disintegrates into a messy, unsightly surface. *Oil and wax should never be used together.* If floors are to be preserved, there must be no compromise in the selection of the preservative. If oil is to be used, no wax should be permitted and if wax is selected, that particular building will never use oil on its floors.

Inasmuch as I have pointed out the advantages of using wax as a preservative in the preceding paper, this article will deal with the maintenance of waxed floors.

Janitor's Tools and Care of Tools. Proper tools are of first importance in successful floor maintenance and janitors' tools are unfortunately often purchased on the price instead of the quality basis. It is well, therefore, to consider briefly what tools are required and how they should be selected.

Floor Brush. Floor brushes should have an out-bristle of not more than four inches. Longer out-bristles are unsatisfactory as the brush becomes too soft to be effective in sweeping. When the out-bristle is worn to 1½ inches or less, the brush should be discarded. Handles should be purchased in 6-foot lengths and cut to suit the individual user.

The proper length is determined by the user's height, the handle reaching to the eyebrows when the janitor stands erect with the brush resting on the floor and the handle held in a vertical position.

When not in use, the floor brush should be hung with the bristles away from the wall and off the floor. It should be combed out regularly and kept clean.

Sweeping Mop. Mop heads are made of soft, cotton strands which pick up dirt readily but shed it just as readily when shaken.

A sweeping-mop head differs from a scrubbing-mop head in that it is only half as long in over-all measurement but at the same time contains twice as many strands. A sweeping-mop head, when laid flat measures 18 inches in length and has twice the number of strands of an ordinary scrubbing mop. When in use, it

FIGURE 1.

FIGURE 2.

is described as a 9-inch mop head. A standard width of 6 inches should be used for all mop heads so that the janitor may easily convert an ordinary scrubbing mop into a sweeping mop if the need arises.

All mop heads should be clean when they are hung up to dry after using. For obvious reasons, hanging a mop is the only way to insure cleanliness and long life. It is also advisable to comb out the strands for if allowed to dry with one or more strands remaining crosswise within the center of the mop, it will cause the strands to slip when the mop is used again.

Proper care of the sweeping mop will do much to lighten the labor of the janitor in its use and at the same time give much cleaner floors.

Mop Trucks. These are shown and briefly described later on.

Galvanized Dust Box, Dustpan and Pails. The dust box is of tight construction and measures 21 inches long, 7 inches deep, 8½ inches wide at the top and 6 inches wide at the bottom. From the floor to the top of the handle is 14 inches.

The dustpan is 10½ inches by 16 inches and heavy enough to withstand rough usage. It hugs the floor and picks up dust easily.

The pails are 14 quart capacity, fitted with a heavy wire handle, riveted to the pail and having a wooden grip. A chime at the bottom is desirable when emptying.

Putty Knife. The putty knife should be carried constantly by the janitor to remove gum from floors and to dig dirt out of the corners.

Maintaining Waxed Floors

Sweeping With the Floor Brush. Brush sweeping is the most common way to rid the floor of its daily accumulation of dirt and rubbish. Do not use sweeping compounds on waxed surfaces. There are two reasons for this, the first being that properly waxed floors with their magnetic properties keep the dust down without the use of sweeping compound and the second is that sweeping compounds contain oil which will rapidly ruin a waxed surface. Proper handling of the floor brush is shown in Figure 1.

Sweeping With the Sweeping Mop. Considerable space has been given to the description of the sweeping mop because its use in the daily maintenance of floors is so uncommon. For five years, the sweeping mop has been satisfactorily employed to keep the floors clean in local school buildings.

It is a difficult task to brush-sweep classrooms because of the many legs on the standard school desks. It is much simpler to get around these obstructions with a sweeping mop. When ground conditions are such that great quantities of sand and dirt are brought into classrooms on the shoes of children, the sweeping mop becomes ineffective and the floor brush must be resorted to, but such conditions are exceptional and occasional, rather than common. A clean sweeping mop, wrung out in hot water under heavy pressure so as to free the mop of excessive moisture, leaving it fluffy when shaken out, should easily pick up a day's accumulation of dirt in a standard classroom under ordinary conditions without recourse to rinsing. The use of the sweeping mop is shown in Fig. 2.

Mop Truck. When using the sweeping mop, the mop truck should be left in the corridor and utilized for thoroughly rinsing the mop before going from one classroom to the next.

Figure 3 shows a 25-gallon mop truck, which saves steps by guaranteeing a generous amount of water for rinsing purposes and is particularly adapted for large high-school buildings.

A smaller truck using pails for the water is available and desirable if the janitor must carry it from floor to floor. This is shown in Fig. 4.

Advantages of Mop Sweeping. It would be reasonable to assume that mop sweeping, when it can be done, leaves the floor in the cleanest condition possible. The objection to the use of the mop is the human inertia factor and the unwillingness on the part of the janitor to change his methods in any way. We have found that once a janitor becomes accustomed to mop sweeping, there is very little brush sweeping done.

I have seen janitors mop-sweep a standard classroom in four minutes, which is approximately one third of the time required to brush-sweep it satisfactorily.

Periodical Maintenance

Floors preserved with two applications of good floor wax are well protected but should be "touched up" periodically if it is not possible to replenish worn spots each week-end.

(Continued on Page 161)

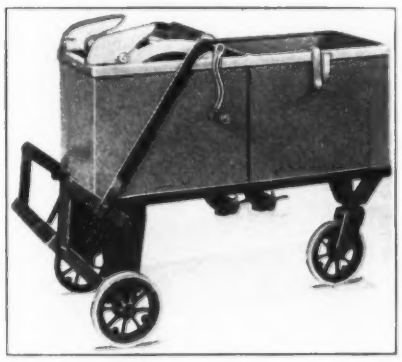


FIGURE 3.

FIGURE 4.

A Study of Ideal Relationships Between School Boards and Superintendents

BASED ON THE OPINIONS OF SUPERINTENDENTS OF SCHOOLS

Frederick W. Porter

In the past ten years educational administrative practice has passed from the horse-and-buggy to the automotive age. This change has caused greater demands for technical knowledge and skill on the part of administrators and has tended to magnify the difference between expert professional and lay functions of the superintendent of schools and the school board, respectively.

These facts have made it seem desirable to study the present relationships and the ideal relationships which should exist between the lay board and the professional administrator.

This study is an attempt to get at the opinions of selected, representative, thinking superintendents of schools as to the ideal relationships that should exist between the professional educational leader and the lay board of control. A companion study is being made by Supt. Hall of Concord, Mass., to ascertain the opinion of representative school-board members.

The questionary which follows was given to a selected group of superintendents at the Washington meeting of the Department of Superintendence in February, 1926. This questionary is not exhaustive, but it does attempt to cover the main points in which relationships exist between superintendents of schools and school boards.

II. Elements in the Problem

The belief that the historical development of the position of superintendent of schools and its relationship to school boards shows a general tendency toward common thinking on the part of lawmakers and the public, school boards, and superintendents themselves is the basis of this study. The attempt is made to see how closely in agreement superintendents are on relationships with school boards and what superintendents believe those relationships should be.

1. The first element in the problem was to discover whether the relationship between school boards and superintendents could be described in broad terms. It appears from the school laws of most states and the court interpretations of these laws, that it is a generally recognized principle, that the duties of the school board, a lay board of control, are largely legislative and judicial, while the duties of the superintendent, a professional general manager, are largely executive and advisory. The statutes of some states give such duties in general terms, allowing for the carrying out of the spirit of the law, while the statutes of other states define in detail numerous specific duties of school boards and superintendents. In the latter case the spirit of the statutes corresponds to that expressed in general terms in the former case. Thus this study was made with the accepted point of view that the function of the school board is legislative and judicial and the function of the superintendent executive and advisory.

2. A second element in the problem was to discover how the superintendent differs in professional knowledge and training from school board members in order to determine in general the knowledge, skill, and training the superintendent must possess in order to meet the legal and theoretical requirements for acting in executive and advisory capacity and further to discover what qualifications were legally and theoretically necessary and desirable in school board members. The answer to this question may be found in the statutes of every state in the Union. Practically any citizen of legal age, except, in some states, if receiving money as an employee of the school board, may be a candidate for and, if elected, serve as a member of a school board subject to the minor idiosyncrasies of the law of various states and the charters of various cities. In no case are any requirements as to knowledge, training, or skill in school matters laid down for school board members. Thus the members are laymen in so far as professional school matters are concerned and are a board of control representing the people of the municipality and the state, to whom, for convenience, is delegated the job of operating the schools.

The superintendent, on the other hand, in practically every state is required by law to meet certain standards of professional training and experience and in cases must secure a certificate from the state setting forth that he meets the professional requirements. Thus it will be seen that the superintendent may be considered a trained professional expert and that this status may be recognized and accepted in considering his relationships with the school board made up of laymen.

3. Accepting these two premises namely, (1) that the function of the school board is legislative and judicial while that of the superintendent is executive and advisory and (2) that school boards are made up of laymen while superintendents are professional experts, the next problem was to find out what the main relationships between the functions of the school boards and superintendents might be. It was found in the case of the states whose statutes laid down the duties of school boards and superintendents in general terms, that there was a wide latitude for interpretation as to what the more specific relationships and functions of school boards and superintendents might be and, even in the states whose statutes were very specific and detailed, that interpretations to meet many situations were needed in order to know just what the interrelationships and functions in these situations were. That is, accepting the premise that the function of the board is legislative and that of the superintendent executive and advisory, what does the superintendent have to do, if anything, with the carrying out of the board's legislation? This is the question this study attempts to answer.

4. The fourth and next element in the problem was how to attack the situation to get the answer to the above question. It appeared that either of two general points of view might be taken: (1) What is the present practice? (2) What is desirable practice?

If the problem had been attacked in accordance with the first proposal, it would have meant a simple counting of noses to learn what is taking place, a national census of present practice. In the opinion of the writer such a procedure was not calculated to produce anything of value, as the heresy of today is the orthodoxy of tomorrow and a study that gives the maximum value is one which looks forward and points the way ahead, not one which deals with practices that are often fossilized and based on the inertia of unthinking tradition. Thus it was decided to make this study one of the ideal relationships which should exist between school boards and superintendents of schools and not one of actual practices.

5. Obviously, different groups of people with different points of view would hold different ideas on this matter, and as the question was to be studied on the basis of ideals for the future, which must of necessity be part theory, it was decided to limit the study to one group, namely, the superintendents of schools. The writer will admit that value would have been derived from a study of this question from the point of view of the general public, or of legislators, or of business men, or of school-board members, but it was necessary to limit it to one group. The group selected was that which had probably spent more intelligent thought on and had more practical experience in the matter than any other. The views of this group may be biased and must have been affected by the fact that superintendents of schools are superintendents of schools, and have a personal interest in their own advancement.

III. Type and Distribution of Opinions on Which Study is Based

Pursuing the theory that the study should be concerned with ideal relationships and should point the way for the future, it did not seem wise to secure the opinions of superintendents indiscriminately, as some would give as ideal present practices which were not ideal, and many had no opinions on the matter, had done little thinking on the matter, and had no background for thinking on the matter.

The problem seemed to be to get the opinions of representative, intelligent, well-trained, experienced, thinking superintendents of schools distributed over a wide enough area that they might be said to represent the United States superintendents in the class characterized by the adjectives in this sentence.

This problem was solved when Superintendent Burr Merriam, of Framingham, a member of the "96 Club," agreed to get the opinions of the members of this club who attended the convention of superintendents at Washington in February, 1926. The "96 Club" is composed of two superintendents from each state of the Union and only superintendents who have the qualifications described by the adjectives in the next previous paragraph can become members of the club. As the club meetings are held in connection with the meetings of the Department of Superintendence, it follows that those superintendents who belong are interested not only in their local situations but in education as a problem of national scope and have a broad general conception of educational affairs.

That this arrangement gave the study a representation of all sections of the United States may be seen by the following:

Questionaries were received from the superintendents of schools at: Mount Clemens, Mich.; Little Rock, Ark.; Racine, Wis.; Greeley, Colo.; Fargo, N. Dak.; Charleston, S. C.; Oskaloosa, Iowa; Pueblo, Colo.; West New York, N. J.; Binghamton, N. Y.; Fresno, Calif.; Gloucester, Mass.; Beatrice, Nebr.; Albuquerque, N. Mex.; New London, Conn.; Baton Rouge, La.; Phoenix, Ariz.; Petersburg, Va.; Newport News, Va.; Fort Smith, Ark.; San Jose, Calif.; Hoquiam, Wash.; Sault Ste. Marie, Mich.; Charleston, W. Va.; Grand Forks, N. Dak.; Pierre, S. Dak.; Westerly, R. I.; Kirksville, Nev.; Tucson, Ariz.; Sheridan, Wyo.; Saratoga Springs, N. Y.; Bellingham, Wash.; Chillicothe, Ohio; Waco, Texas; La Crosse, Wis.; Winona, Ill.; Crawfordsville, Ind.; Oneida, N. Y.; Sheboygan, Wis.; Portsmouth, Va.; Mesa, Ariz.; Maryville, Mo.; Bessemer, Ala.; Chicopee, Mass.; Salamanca, N. Y.; Lorain, Ohio; Pocatello, Idaho; Altoona, Pa.; Rutland, Vt.

15 from mid-western states west of the Mississippi.

7 from southern states.

11 from eastern states.

3 from Pacific coast states.

9 from mid-western states east of the Mississippi.

IV. The Questionary

The best device for securing the opinions of the group seemed to be a questionary. Snap judgments decrease the value of questionaries so that it was decided to pass out the questions to the group, explaining the purpose so that all would have common ground for their opinions, and to request the group to take the questionaries home, answering and returning them after careful thought and consideration had been given. This procedure was followed.

Since our study aims to learn the opinions of superintendents on two main questions: (1) What, if anything, does the superintendent have to do with the legislation of the board? (2) What, if anything, does the board have to do with the carrying out of its legislation? The questionary is divided into two sections. There is also a third section aimed to cover personal policies of the superintendent in his relation to his board, which do not have to do with the formal legal opinion of the schools.

The statement of the first question is a statement of what it was desired to learn from the entire first section of the questionary and the other questions seek data on subdivisions of the main thought in this question. It can be seen that this question, "What should the superintendent do in influencing the school committee to adopt general policies," is simply another way of asking "What, if anything, does the superintendent have to do with the legislation of the board?" Section A of Question 1 aims to find out whether it seems desirable that the superintendent bring influence to bear on the board through the public, and Section B whether it is desirable for the superintendent to bring influence to bear through his dealings with individual members of the board outside of regular meetings. Questions 2, 3, 4, 5, and 6 are an attempt to find out the opinion relative to how much information of a general nature, not bearing on a question at issue, should be furnished to a board on the initiative of the superintendent either for general information or as a background for some proposal which the superintendent plans to make in the future.

The second section of the questionary is an attempt to find the ideal answer to the question "What, if anything, should the board have to do with the carrying out of its legislation?" It should be assumed, in view of the philosophy previously stated, that when a predominance of opinion favors placing authority in a matter under the heading "jointly" it should be considered a matter of general policy or legislation and handled in accordance with Question 1 of Section I. It was felt that any common method with reference to the placement of authority would fall under one of the four headings, Superintendent, School Board, Jointly, Cooperatively, explained at the beginning of Section II of the questionary. The headings of Finance, Matters Pertaining to Instructional Staff, Noninstructional Staff, Instructional Problems, Noninstructional Problems, Problems of Existing Buildings, Furnishings and Grounds, and Problems of Proposed Buildings seem to cover the main fields of public-school operation and the sub-topics under these headings, while not inclusive, are representative of the important types.

Section 3, while not directly pertinent to the legal problem of school operation, was included because it deals with certain more personal relationships of the superintendent with his board and with the community in which he works.

THE QUESTIONARY AND TABULATION OF ANSWERS AND COMMENTS

Section I

On questions of general school policies, assuming that the superintendent shall recommend and the school committee make decisions:

1. What should the superintendent do in influencing the school committee to adopt general policies?

A. Should he discuss matters of general policy with the public before ascertaining the attitude of his school committee?
Yes, 2. No, 43.
Comments: Not usually. Not necessarily: I prefer to have school committee have first information. No, unless presented by the public. Should know the needs of the school and attitude of the public before recommending to committee. He should listen but not discuss. No—ordinarily.

B. Should he discuss outside of regular meetings questions of educational policy then under consideration with his school committee?
Comments: I am not sure of the meaning of this question.

1. Individually.
Comments: Depends upon nature of policy or problem. Only as they wish to discuss them with him. Yes, depends on circumstances.
a. As a practice, 13.
Comments: I see no objection except the amount of time involved. Provided it is a policy and not a case of an individual.
b. Occasionally, 27.
Comments: He might be justified. Perhaps. In certain friendly groups. With consent of committee. Depends on nature of the matter.

2. At informal gathering of the Board at which entire membership is informed.
a. As a practice, 27.
Comments: I see no objection.
b. Occasionally, 21.
Comments: If it seems to be the time and place and the opportunity.

2. When contemplating the extension of an old, or inauguration of a new public policy, should the superintendent raise the question with his committee before he is ready to make a formal recommendation?
Comment: There must be many questions on which superintendent needs the reactions of the committee before definitely deciding what his recommendation ought to be. Especially true for the superintendent in a new position. It is advisable sometimes to take time to let suggestions soak in before making definite recommendations. Sometimes it may be better not to make a recommendation if it is certain to be rejected or granted merely because superintendent asks it but without real approval of committee. Our board of education is fiscally independent. The superintendent has as free a hand as he could wish. I do not believe that he should be wholly responsible. This whole thing depends so much upon your situation and the interrelations of your factors that it would, in my judgment, be unwise for a superintendent to follow any preconceived policy: his policy must fit the situation. The thing is to get things done without hurting your machine for future use. Better not contemplate out loud. An informal discussion may shed light on the question. Reactions can be had. It gives the superintendent an opportunity to do missionary work and keeps him from recommending a program and having it turned down. A slight delay may change defeat to victory. It is a bad policy to have board veto a recommendation. Sometimes it is a good policy to prepare well.

A. As a practice, 23.
Comments: Depends on his status with board. Informal discussion is frequently helpful. I see no objection to this course.

B. Occasionally, 22.
Comments: Yes, in order to get their viewpoint and to cause them to think.

3. Do you keep members of your committee informed as to practices in cities of comparable size in such matters as follows?:
A. Salaries.
B. Resources and expenditures.
C. School Calendar.
D. Teaching load.
E. Scope of instruction.
F. Building accommodations.
G. Other matters.

A. As a practice.
Comments: In general only—not in detail.
Yes, 32. No, 5.

B. Occasionally.
Comments: In general way, yes.
Yes, 18. No, 1.

4. If your answer to question 3 is in the affirmative, what method do you use?
A. Bulletins. Yes, 25. No, 3.
B. Annual report. Yes, 25. No, 4.
C. Digests or clippings from current literature. Yes, 23. No, 1.
D. Verbally with the committee. Yes, 42. No, 0.
Comments: Usual method.
E. Other means—list:
Monthly reports.
Have members attend state meeting of board.
Data compiled from state reports.
Special reports.
Written report semiannually.
Special reports.
Convention reports.
Committee reports.
Monthly reports.
Special discussion in writing reinforced with reference to sources, etc.
Monthly reports.
Each is a subscriber to SCHOOL BOARD JOURNAL.
Special report whenever occasion arises.
Bulletins and annual reports.
Comparative statistics.
Questionaries and special letters of inquiry.
Special reports as needed.
Occasional reports as the need arises.
Written reports.
Mostly with the individual members of committee.
State Bureau of Municipal Research reports.
Questionaries.
Questionaries, tabulations on salaries.

5. Do you keep your committee informed on best educational thought, practices, and legislative educational trend on matters such as the following?
Comments: Boards in Alabama give a superintendent wide latitude. A, is worked out by superintendent and committees he appoints. He reports to the board. C, D, E, are discussed by board but superintendent decides. As far as they have any interest in such matters. But little interest in academic discussion of these topics.
A. Curriculum revision.
B. Scope of instruction.
C. Types of organization.
D. Methods of instruction.
E. Changing points of emphasis.
F. Other matters.

A. As a practice. Yes, 19. No, 5.
Comments: Try to.
B. Occasionally. Yes, 20. No, 1.
Comments: In general—not in detail.

6. If your answer to question 5 is in the affirmative, what method do you use?
A. Bulletins. Yes, 20. No, 2.
B. Annual report. Yes, 21. No, 1.
C. Digests or clippings from current literature. Yes, 14. No, 0.
D. Verbally with the committee. Yes, 37. No, 0.
Comments: Usual method.
E. Other means—list:
Reports of conference as N. E. A., state, superintendents'.
Special reports.
Special reports on convention.
Semimonthly report.
Monthly reports.
Special reports from time to time.
Bulletins and annual reports.
Questionaries and special letters of inquiry.
Special reports.
Reports on national, state, and local meetings.
Occasional reports.
Written reports.

III

Miscellaneous personal policies of the superintendent.

1. Do you keep the members of your school committee informed with reference to the work of the instructional staff? Yes, 44. No, 2.
Comments: Not inclusively but specifically. Yes, annual report. Yes, when necessary. No, except in rare instances. To some extent. Occasionally. As far as possible. In general, not in detail. In case of special need. Especially of particularly good work, it is sometimes difficult to inform committee of things that ought not to become matters of public gossip. Anything of real interest. In general only, not in detail.

2. Do you keep the members of your committee informed with reference to the work of the noninstructional staff? Yes, 40. No, 6.
Comments: On request, also in certain cases. Yes, when necessary. No, except in rare instances. The business manager's job. In case of special needs, especially of particularly good work, it is sometimes difficult to inform committee of things that ought not to become matters of public gossip. Anything of real interest. In general only, not in detail. As far as possible. Occasionally.

3. Do you invite members of your committee to visit schools?
A. As a practice, 18. Yes, 46. No, 0.
B. Occasionally, 23.
Comments: They do not come; I feed them to get them. Each year the board as a body visits all schools. Invitation seldom accepted.

4. Do you invite members of the school committee to teachers' meeting?
A. As a practice, 3. Yes, 26. No, 0.
B. Occasionally, 21.
Comments: They do not come. Opening meeting of year. They have a general invitation. Special invitations are extended at times. Not often. Only rarely. Always welcome. Rarely does one come. Have very few general meetings, then only to hear a speaker. Small group meeting of essentially interested much better.

5. Do you aim to maintain equal social relations with all the members of your committee?
Yes, 40. No, 6.
Comments: (Yes) personal. No social relations with them? (Yes) unimportant matter. (No) not outside. Avoid above as much as possible.

6. Do you aim to maintain equal professional relations with all the members of your board, with the possible exception of the chairman?
Yes, 43. No, 2.
Comments: Try to. In meetings. Don't know what this means. The only difference between the chairman and others is that he presides at meetings. No exception.

7. In general, is the relation with your board formal, 8, or informal, 40?
Comments: Depends on circumstances, city and relationship. (Formal) in meetings. (Informal) on other occasions. In most cases informal. Informal, outside. Formal, meetings. Yes, except at meeting of board. Superintendent is secretary to board.

8. Do you think the superintendent ought to take active participation in such civic affairs as: Red Cross, 38. Chamber of Commerce, 42. Rotary and other clubs, 44. Church, 40. Boy Scouts, 41. Y. M. C. A., 39.
Comments: (Boy Scouts.) Doing this, of course, with discretion. School affairs should come first. Superintendent should know his limitation. Some, but are enumerated above. As far as his time permits. I am a member of each of the above and on the board of directors of three. He should keep in touch. I belong to some organizations; other members of staff to others. In my judgment he should be interested in these but he has a more important public job than these to attend to and one such important job is enough for any man to manage well. Time would scarcely permit active participation in all. I spend active energy upon the first four and give moral support to many others. I think he should join in helping all the above, but not to the extent that he shall become known for any of them rather than as superintendent of schools but as sympathetic with them, since he is superintendent of schools. Depending on his inclinations and strength. If he feels that he should and desires to do so, yes; otherwise, no. Providing he does not take on so many that he cannot reserve at least one half of his time for school work.
(Church) his own business. (Church) must be careful. Yes, absolutely. Red Cross, Boy Scouts, and Y. M. C. A., if he can spare the time. There

SECTION II
What should be the general policy with reference to the placement of authority in the following?
Definition of Terms

Superintendent means without confirmation by the committee.
School Board means without recommendation by the superintendent.
Jointly means the superintendent recommending, the committee confirming by specific vote.
Cooperatively means the superintendent working with committee as a whole or with subcommittee.

	Superintendent	School Board	Jointly	Cooperatively
A. Finances.				
1. Fixing budget	2	....	30	18
2. Presenting budget to appropriation body	5	2	14	18
Comments: Not required here. Committee action final. Board action is final. Board here settles its own budget.				
3. Fixing salary schedules	....	....	....	....
a. Instructional staff	3	....	31	14
Comments: Schedule.				
b. Noninstructional staff	3	2	25	17
Comments: Schedule.				
Totals	13	4	100	67
4. Purchasing of textbooks	28	....	13	2
Comments: Dependent on cost. We do not supply books; pupils buy them.				
5. Purchase of other instructional material	28	....	19	3
Comments: If large amount.				
6. Purchase of noninstructional material	20	3	21	6
Comments: If large amount.				
7. Approval of bills before payment	10	10	20	7
Comments: Educational bills.				
8. Keeping of accounts	25	8	8	6
Comments: Through secretary. Business manager's job.				
Totals	111	21	51	24
B. Matters pertaining to instructional staff:				
1. Employment	8	....	36	3
Comments: Frequently as superintendent recommends to committee.				
2. Fixing salaries	5	....	34	8
Comments: Under schedule. Either. Committee should always concur.				
3. Discharge of	9	....	37	2
Comments: Superintendent with approval.				
4. Promotion	16	....	29	2
5. Demotion	13	....	30	3
6. Transfer	35	....	12	1
7. Assignment	38	1	8	....
8. Determining requirements of professional growth of service	25	....	20	3
Totals	149	1	206	22
C. Noninstructional staff:				
This comes under jurisdiction of business manager with approval of superintendent.				
1. Employment	11	4	23	8
Comments: Frequently as superintendent-business manager.				
2. Fixing salaries	3	4	28	11
Comments: Under schedule.				
3. Promotion	16	1	22	8
Comments: Either.				
4. Demotion	14	1	23	8
Comments: Either.				
5. Transfer	24	1	14	8
6. Discharge	16	1	23	7
7. Assignment	28	1	11	7
8. Fixing qualification	21	1	16	9
Totals	133	14	160	66
D. Instructional problems.				
Recommendations on 1, 2, 3, 9, 10, must be ratified by committee.				
1. Revision of curriculums	44	....	15	....
2. Extension of curriculums	23	....	23	2
3. Selection of textbooks	31	....	15	1
Comments: State law. State adoption. State Board of Education.				
4. Selection of other instructional material	37	....	10	2
Comments: Depending on amount.				
5. Placement of pupils	43	....	4	1
6. Definition of district lines	16	....	26	3
7. Teaching load	37	....	9	1
8. Disciplinary problems	42	....	5	1
Comments: (Supt.) Once in 6 years as a coop. Coop. if serious. (Supt.) If serious, coop. (2 in 6 years).				
9. Standards of promotion	39	....	9	....
10. Standard of graduation	29	....	19	....
Comments: Also state law. State requirements.				
11. Requirements for honors	37	....	10	....
Comments: Through principals.				
12. Qualifications for admission	30	....	16	1
Comments: State law also.				
Totals	408	....	161	12
E. Noninstructional problems.				
Comments: Matter of law.				
1. Determining sessions of public schools	6	....	39	4
Comments: Either jointly or cooperatively.				
2. Transportation	....	....	36	6
Comments: Either jointly or cooperatively.				
3. Fixing school calendar	6	....	40	2
4. Fixing Rates of Tuition	....	1	36	7
Comments: Have none. No fees charged.				
Totals	12	1	151	19
F. Re. existing buildings, furnishings, and grounds.				
1. Repairs	4	2	23	16
Comments: (Supt.) In special cases. (Jointly) generally.				
2. Remodeling	2	2	25	15
a. Approval of plans	....	....	....	....
3. Selection of new equipment	13	....	27	10
Comments: Either jointly or cooperatively.				
4. Purchase of new equipment	12	....	28	9
Comments: Either jointly or cooperatively.				
5. Inspection	17	1	17	15
Totals	48	5	120	65
G. Re. proposed buildings.				
1. Discontinuance of old buildings	1	2	33	14
2. Selection of sites	1	2	28	20
3. Purchase of sites	....	4	24	20
Comments: (Jointly) and election.				
4. Selection of architect	1	9	19	19
5. Approval of plans	1	2	24	20
6. Selection of contractor	....	15	15	17
7. Awarding of contract	....	20	14	15
8. Supervision of construction	6	14	11	14
Comments: (Supt.) Final authority naturally rests with board of education. Duty of architect.				
9. Acceptance of building	....	17	14	16
10. Selection of equipment	11	2	23	13
Comments: Either jointly or cooperatively.				
11. Purchase of equipment	9	3	24	12
Comments: Either jointly or cooperatively.				
Totals	30	90	229	180
Grand Totals	904	136	1208	455

is a limit. A superintendent should reserve time for reading and reflection. I have answered according to actual practice in Grand Forks, excepting in case of some questions which have not arisen. Then I have indicated what I believe the practice would be. He should be a real citizen but needs to guard against being persuaded into too many activities that require time and energy. Only as really interested personally. His job as superintendent does not involve running or trying to run the whole community. Largely a matter of personal taste and gifts. I think the superintendent should be recognized as a community leader, should assume the responsibilities that come with community leadership and should be accorded the same recognition as other community leaders. He should not be partisan or lopsided in his interest. There should be no obligation. Knowing the feelings of the people he serves, I would say he will take part if he is wise in the order checked. Yes, in so far as he can do so without sacrificing his regular duties. He ought not to be so active in some of these as to offend a part of the public. All good, if he has the time. His school work should come first. Church not a civic affair.

V. Comments on the Questionary and the Results

At the risk of repetition may I say that the data represent opinions of men who have had practical experience and also professional training for the job of school superintendent. This data comes from representative superintendents widely distributed. While the statistical value of this study is open to question the central tendencies represent what will be the common practice in school board-superintendent relationships for the next ten years.

Section I, bearing on the legislation of the school board, is enlightening in that it shows that there is no general practice and no general opinion as to just what should be the relationship between superintendent and board other than the assumption that the superintendent should make recommendations to the board before it legislates. Such comments as "depends on nature of policy or problem," and "depends on circumstances," seem to govern largely the superintendents' conduct in these relationships. Here it appears is a field where the superintendent must exercise judgment, and a great measure of the success of the school system under his supervision will depend on how good this judgment is. Certainly, if this is a fact, professional training schools for superintendents should give a great deal of attention in training prospective superintendents for the proper exercise of this judgment. If, on the other hand, there is one best way of handling such matters, the research department of these schools should find out what it is, so that the schools can teach it to prospective superintendents. It seems to the writer that the questionary has here pointed out a practical dilemma that should have the close study of professional training schools for superintendents.

It appears to be general opinion that general information should be furnished school boards by superintendents, which may or may not have a bearing on current problems before the board, especially information as to current educational trends and practices in cities of comparable size.

If a delegate is conceived to be one who is elected to carry out specific wishes or orders of the electorate but not to use his own judgment and a representative is a person elected to represent the people according to his own uninstructed judgment, it appears that superintendents of schools believe that school-board members should be representatives. The opinion of 43 to 2, opposing the discussion of matters of general policy with the public before ascertaining the attitude of the school board is conclusive.

An analysis of Section II, which deals with the question, "What, if anything, shall the board have to do with the carrying out of its legislation?" shows that there is a definite trend of opinion in this matter.

All matters under II-A Finance, the approval of bills before payment, the actual employment, fixing of salaries and discharge of all employees, promotion and demotion of employees, definition of district lines, setting hours of school and school calendars, transportation, rates of

(Continued on Page 157)

Supervision—Its Weaknesses and Opportunities

A. H. Horrall, Superintendent of Training School, Cheney, Wash.

It is easy enough for anyone to find fault with most anything under the sun and supervision of instruction is no exception. We have no difficulty in picking out the things that are wrong with supervision, but to find a blanket cure-all or an individual cure for each weak point is next to impossible. Realizing this, no attempt will be made here to suggest a method or system of supervision that is without fault, but rather to call attention to some of the weaknesses that are more or less obvious and some of the opportunities that arise and serve to compensate supervisors, in a way, for the daily share of disappointments, difficulties, and annoyances which they meet.

The outstanding fault that easily wins first place in our list of weaknesses in supervision is that of *inspection* rather than supervision. The inspector type of supervisor believes that it is his duty to see that the teachers keep good order, that they follow the program made at the beginning of the year, that they obey all rules and regulations established by the school board, and that they require similar obedience from the pupils. The supervisor of this type has been well dubbed "snoopervisor." He sometimes wears rubber soles and may often be found in the cloak-rooms, or peering through the classroom door from the hall. He is likely to "drop into" a room most any hour in the day, stay a few minutes without making any comment, either oral or written, and leave with puzzled consternation in the teacher's mind. If he says anything, it is usually to comment on some detail which he does not like or wants changed. Needless to say, he is disliked and often feared by his teachers who dread rather than welcome his visits. He doesn't see the best type of work the teachers can do, for they are working under a strain while he is present. A man of this type cannot get cooperation from his teachers; he is the sort that causes teachers to organize for their own protection against the administration.

The Weakness of "Just Visiting"

A second undesirable type is the supervisor who is without system or definite objectives. He has a few minutes to spare, so he visits Miss Third Grade. He may confer with her briefly after the class, then he may jot down in a note book the date and hour of the visit, and depart for a similar visit to some other teacher. He is not looking for any particular type of work or watching the development of one subject through the various grades; he is just "visiting." He has not a clear conception of the weak points in each teacher's work and he cannot give consistent aid.

How is this type of supervision to be measured? Can it be of much value to the teacher? The supervisor may have a hazy notion as to the teaching ability of the teachers, but he cannot know the strong and weak places to which the pupils are being exposed throughout the eight grades. He is the type that usually has very little background or preparation for his work, but he holds his position because of a sunny smile, or some other winning trait. Some day the secretary of the local "taxpayers' league" will ask the president of the school board just what contribution this man is making to the schools of their city. Unless he is very diplomatic, it will be impossible for the president of the board to answer, and it may be extremely difficult for the supervisor himself to convince the economically-inclined citizens that the schools would be discommoded were his position eliminated.

Tactlessness and Softness

Lack of tact and positive unkindness are serious weaknesses in supervision. A supervisor *must be tactful* and at the same time positive and definite. The man who begins a conference with the teacher by bluntly telling her that she is a failure, or, through his comments, causes her to burst into tears, will not get very far in helping her to improve in service. On the other hand, the "soft" type who is too bashful, or afraid of injuring someone, to call attention to faults is equally undesirable.

Again, a supervisor may see a fault, but be unable to suggest a remedy. The criticisms of this man are too general. He may say "your discipline is poor," or "the children didn't seem to get much out of that lesson," instead of saying "if you move Tommy Brown into a seat in another part of the room, you might be able to stop those annoying disturbances we had today," or "after you have explained division of decimals, why not ask the pupils a few questions to find out if they understand the new process?" Every supervisor will find problems at times for which he cannot offer a satisfactory solution. But the man who has genuine supervisory ability and who enjoys the good will of his teachers, can approach a teacher with a problem, tell her he has no immediate solution, and ask her cooperation in improving conditions until such time as he finds a solution of the difficulty.

I hesitate to call the next point a weakness; it is more nearly a *lack* than a *weakness.* I refer to secondary supervision and to the supervision of some of the newer subjects. Why are teachers of shop subjects practically unsupervised by the superintendent or supervising principal? Why is it that we have not more supervision of teaching in the high schools? Is it because we are still laboring under the impression that a person who "knows" a subject can teach it? Perhaps he can teach the *subject,* but what is required today is that he be able to teach the boys and girls in his classes. We have seen cases where the teacher was an excellent student himself, but failed because he could not or would not use the correct methods of presenting the subject to the pupils. Some high-school principals say that they do not attempt to supervise the work done by their teachers because they are not as well acquainted with the subject matter as the teacher and *"do not know whether the teacher is making mistakes or not."* One principal says: "I don't know any Spanish and never did get anything out of high-school physics. How am I going to supervise these subjects?" The only answer here is there are basic principles that apply to *all* teaching, and a trained supervisor can recognize whether these principles are being applied even if he is *not* familiar with the subject matter. Plenty of literature is available on the immediate objectives and the best methods in every elementary-school and every high-school subject so that even the busiest supervisor may become familiar with the high spots.

The Higher Vision

The weakness of mere inspection described above could be most easily overcome if the supervisor would analyze the meaning of the word *supervision* — super-vision — higher or greater vision. The supervisor, who not only tries to help the teacher to attain a *greater vision* of her work and of herself, but possesses a higher vision himself, so that he can see well into the future, is a priceless asset to any school system. The inspector who prowls about the school corridors and merely inspects does not see the possibilities and opportunities of his position. I know of no greater service in education than that of helping a teacher to improve, and at the same time of seeing and planning into the future for greater improvement, as soon as the teacher is well along on one plateau of efficiency. Certainly the person who slips into a classroom, takes notes most of the time the class is in session, then leaves without giving the teacher an opportunity to learn what improvements she could make, does not deserve to be placed in an executive position. If a supervisor is not entirely familiar with the lesson that has preceded the one he observed, he may see some things in the one lesson that do not, on the surface, seem to be the best procedure. After the supervisor has talked with the teacher, questioned her concerning the points in doubt, the situation may be entirely cleared. By conferences with his teachers, the supervisor can frequently obtain suggestions that he may carry on into his work with other teachers. The supervisor who builds up close cooperation among the teachers themselves and between the teaching staff and himself, is reaching his maximum ability to serve the schools.

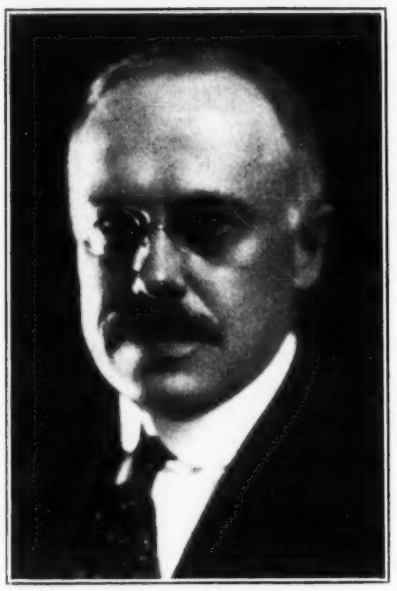
As the supervisor expects his teachers to plan their work for each day, so should he have a definite plan for his own work. Two general types of well-planned supervision are widely in use. Both types are used at different times by good supervisors, depending on the particular objectives of supervision at a given time.

Horizontal and Vertical Supervision

The "horizontal type" of supervision refers to a long visit, extending over an entire session, a day, or even several days, with the same teacher. This method is used where the teacher seems particularly weak, and the supervisor wishes to analyze the situation to locate the particular trouble or troubles. It is frequently impossible to find out where the difficulty lies if the teacher is only visited for a few minutes or part of a session. One may sense an unwholesome situation, but careful analysis and diagnosis are necessary. Haste in drawing conclusions may cause an otherwise good supervisor to do a teacher an injustice and permanently impair her effectiveness. Such action may also cause the supervisor to lose the respect of his teachers.

This horizontal method is also used when the supervisor finds an exceptionally strong teacher who uses methods that are out of the ordinary. If it is impracticable to have other teachers

(Concluded on Page 157)



O. T. EASTMAN,
Business Manager of the Board of Education,
Omaha, Nebr.

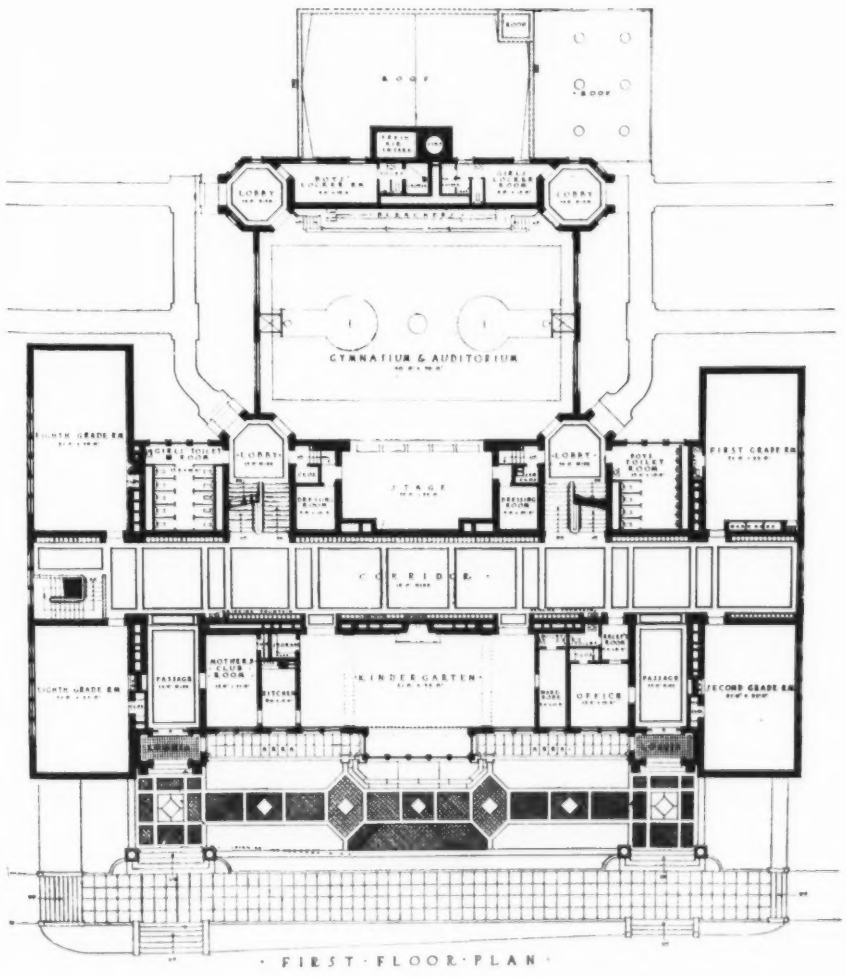
Mr. Eastman, who has been elected as business manager of the board of education of Omaha, Neb., is a well-known business man of that city and a former banker. He was appointed for two years, at a salary of $7,000 per annum.

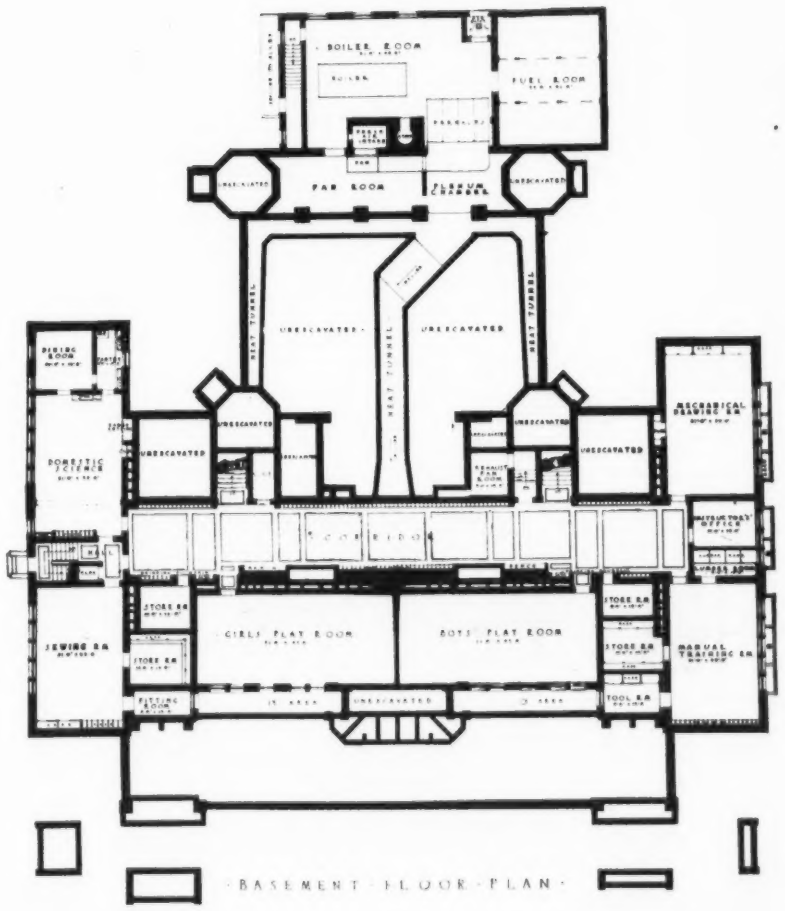
Mr. Eastman is 61 years old, a graduate of Amherst College, and is possessed of wide experience in business and finance. He was formerly in the employ of the First National Bank of Omaha, and since 1920 had been connected with the Merchants' National Bank of that city.

The election of Mr. Eastman was unanimous and ended a struggle of more than a year for bringing the business administration of the school system under the control of an experienced business man.

HORATIO G. BENT GRADE SCHOOL,
BLOOMINGTON, ILL.

Associates of A. L. Pillsbury, Architect,
Bloomington, Ill.





FLOOR PLANS OF THE HORATIO G. BENT SCHOOL, BLOOMINGTON, ILL.
Associates of A. L. Pillsbury, Architect, Bloomington, Ill.

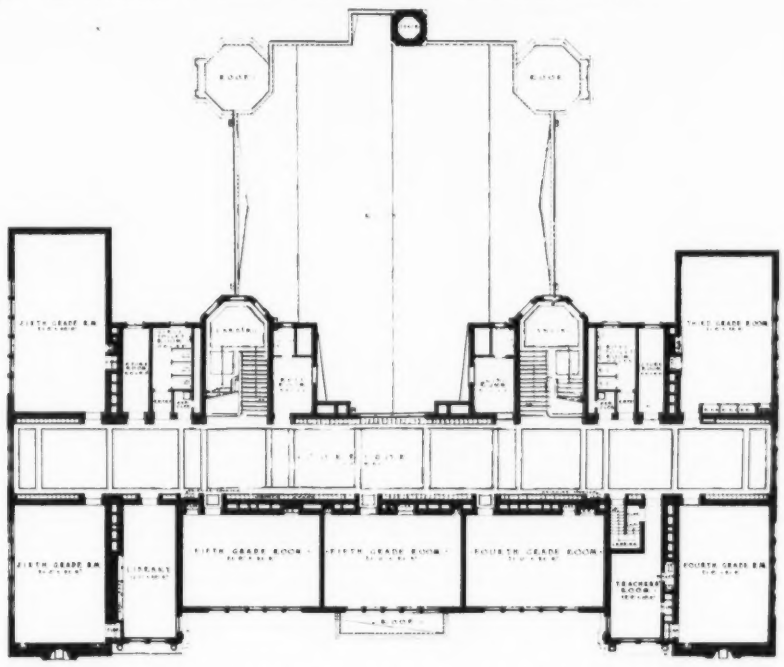
SOME RECENT ILLINOIS SCHOOL BUILDINGS

An experienced educator who has acted as advisor to hundreds of school boards in new building operations invariably recommends the first official step taken; by the employment of a reputable, experienced architect who has specialized in school buildings and whose schoolwork will stand the test of close scrutiny from the standpoint of educational service, true economy, good design, and honesty. This educator recognizes the fact that there is a comparatively limited number of architects who have specialized in schoolhouse work to the extent that they thoroughly understand and appreciate educational problems and can interpret them effectively in terms of needed building accommodations. He knows, too, that time is a test of an architect's work, and he holds that the school boards and superintendents of schools whom an architect has served are the best judges of his buildings, of his honesty, and of his general efficiency.

Architects who design only one or two school buildings in a decade, or even in a lifetime, rarely understand to what extent they are trading upon the pioneering of experienced specialists in schoolwork. They literally "grab" dozens of ideas which have been evolved after intimate study of school programs and refined after observation of varying uses and administrative procedures. In architecture, as in engineering, and in every other field where originality and specialization count, imitation and copying and belittling of service are the penalty of leadership. And still in the long run the genuine school specialist wins recognition through employment and wide patronage, because he will inevitably enjoy the confidence and appreciation of school authorities whom he has served.

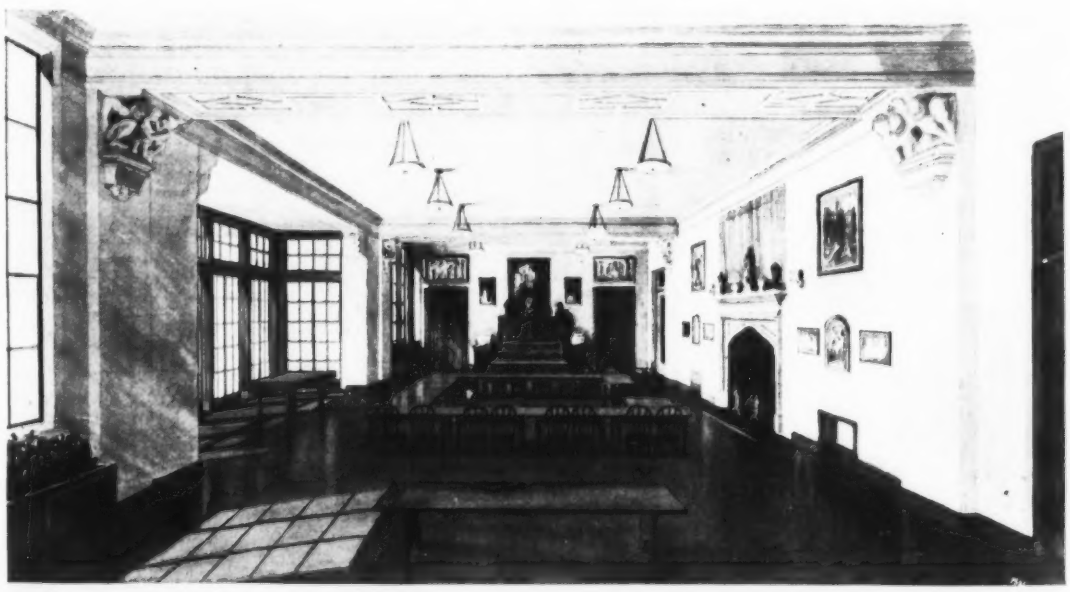
Among Illinois architects who have long rendered a large service to the schools is the late A. L. Pillsbury of Bloomington. Mr. Pillsbury's unfortunate death as the result of an automobile accident last year, caused his associates of more than twenty years to continue to work under the firm name of Associates of Arthur L. Pillsbury, Architect. These men—Philip R. Hooten, Edward Roozen, A. N. Schaeffer, and Edgar E. Lundeen—have continued to devote their attention almost exclusively to schoolhouse work and have during the period of a year completed the interesting group of schoolhouses illustrated in this issue of the JOURNAL.

DETAIL OF FRONT OF THE HORATIO G. BENT GRADE SCHOOL, BLOOMINGTON, ILL.



SECOND FLOOR PLAN

ENTRANCE DETAIL.
HORATIO G. BENT SCHOOL, BLOOMINGTON, ILL. Associates of A. L. Pillsbury, Architect, Bloomington, Ill.



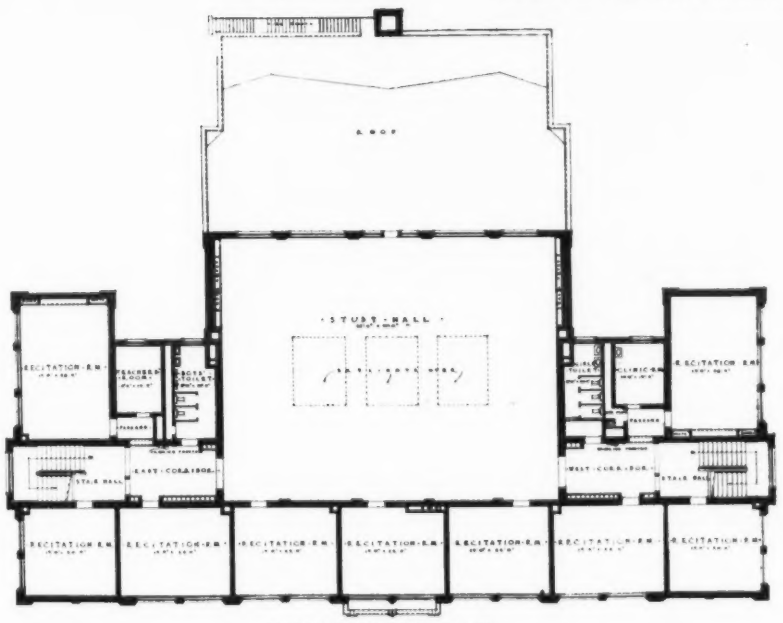
KINDERGARTEN ROOM AT THE HORATIO G. BENT SCHOOL, BLOOMINGTON, ILL.
Associates of A. L. Pillsbury, Architect, Bloomington, Ill.

COMMUNITY HIGH SCHOOL, FAIRFIELD, ILL. Arthur L. Pillsbury, Architect, Bloomington, Ill.

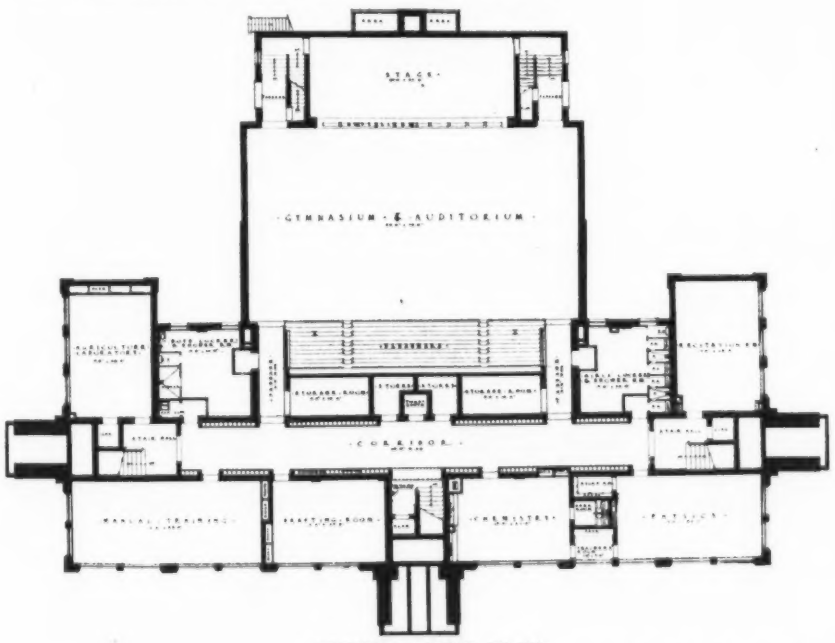
The Bent Grade School

The Horatio G. Bent Grade School, which is named after a citizen of Bloomington, Ill., who for more than 30 years has been a member of the school board and who for many years has served as business manager of the Bloomington school system, was completed in 1926 to accommodate 400 children in the grades. The building is located in one of the best residential sections of the city and is a real social as well as educational center. The gymnasium-auditorium, the kindergarten, and the mothers' club room are used out of class hours for various group meetings.

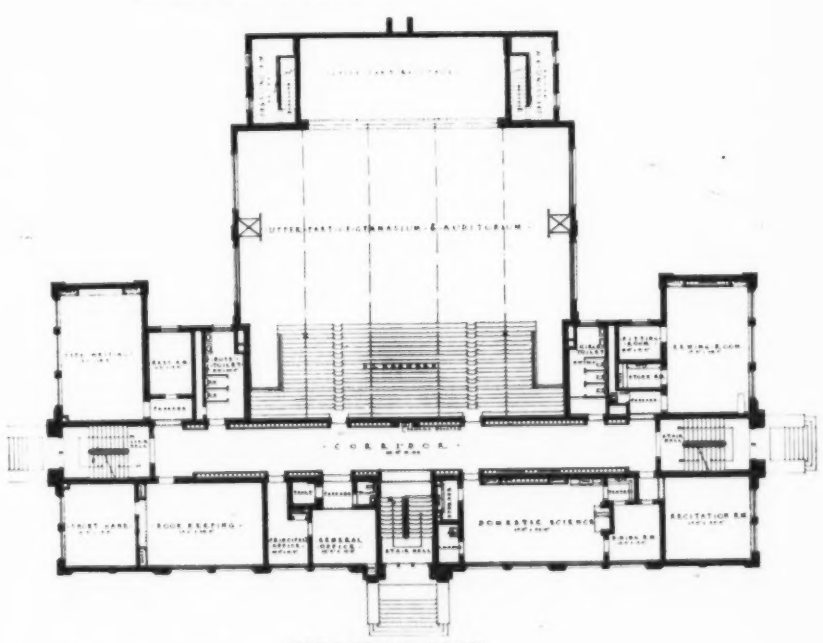
The building is treated in early English Renaissance style and is a rather interesting adaptation of the best domestic types of the style. It is built of rough texture brown and buff mixture face brick laid in English cross-bond. The trim is Indiana limestone. The high-pitched roof is of variegated rough slate, graduated from very heavy slates at the eaves to small slates at the ridge. The gutters and



SECOND FLOOR PLAN.



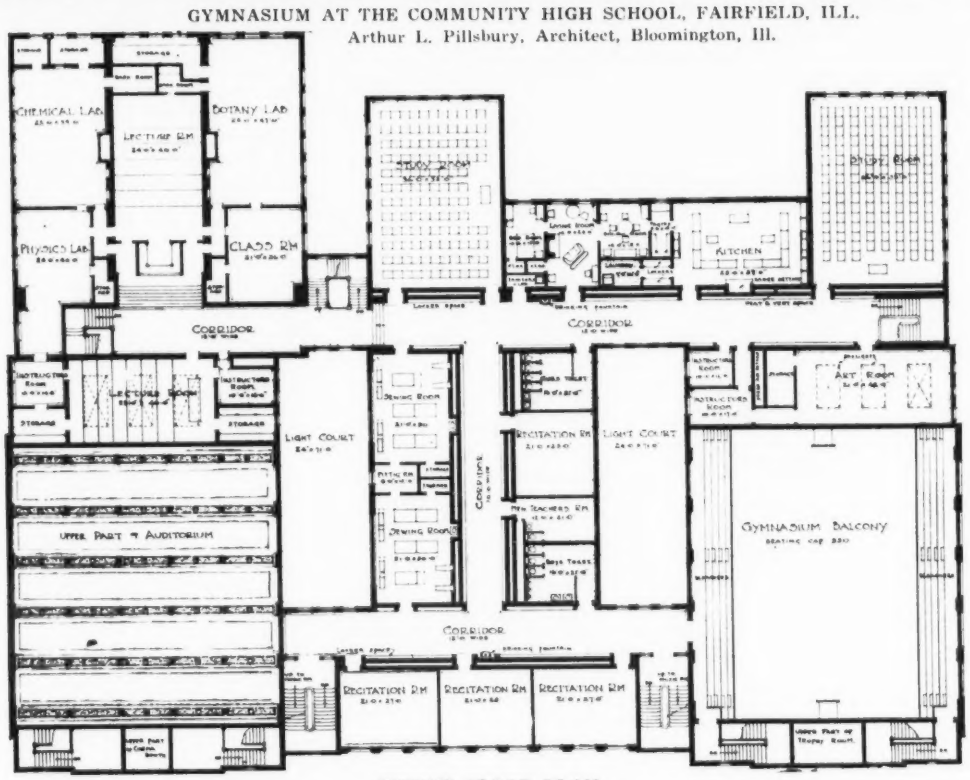
GROUND FLOOR PLAN.



FIRST FLOOR PLAN.

FLOOR PLANS OF THE COMMUNITY HIGH SCHOOL, FAIRFIELD, ILL.
Arthur L. Pillsbury, Architect, Bloomington, Ill.

GYMNASIUM AT THE COMMUNITY HIGH SCHOOL, FAIRFIELD, ILL.
Arthur L. Pillsbury, Architect, Bloomington, Ill.



SECOND FLOOR PLAN.

FIRST FLOOR PLAN.

TOWNSHIP HIGH SCHOOL, STREATOR, ILL. Arthur L. Pillsbury, Architect, Bloomington, Ill.

of rolled-steel sash and frames of the reversible type. The mullions are limestone. All the exterior trim around the windows and the stone mullions run entirely through the full thickness of the walls to form a stone finish on the inside of all the rooms, providing a very interesting treatment and eliminating all other interior trim in the windows.

In the basement are girls' and boys' playrooms, domestic-science kitchen, dining room and pantry, sewing room with storage and fitting room adjoining, manual-training shop with rooms for storage of lumber, tools, finishing, etc., instructor's office and a large mechanical-drawing room.

On the first floor is the kindergarten room, 21'x53', with large bay window opening to the south and containing pairs of French casement windows opening onto a large paved terrace. In connection with the kindergarten a wardrobe and toilet, storage room, mothers' clubroom, and a kitchen have been provided for the use of the parent-teachers' club, and other neighborhood activities. Boys' and girls' toilets, principal's office, and four classrooms occupy the balance of this floor.

The combination gymnasium and auditorium extends to the rear with a playing floor 40'x70' in size. The stage is 20'x34', and there is a large bank of bleachers to accommodate spectators, with boys' and girls' locker rooms underneath. This gymnasium-auditorium is planned to accommodate various community activities and is so arranged that it can be completely shut off from the remainder of the building, with separate lobbies giving access from the side streets.

On the second floor are seven classrooms, boys' and girls' toilets, storerooms, restroom and clinic room, a large teachers' room, and the library.

The construction of the building is fireproof throughout. The floor slabs are of concrete and the corridor floors and stair systems are of terrazzo. The toilets have terrazzo floors, and the toilet partitions and wainscoting are constructed of the same material. The finish floors of all the classrooms are mastic laid directly on the cement slabs. The interior woodwork is of white oak, stained and finished in a most pleasing, light, greenish-gray.

The heating and ventilating load in this building is divided between a steam boiler and a battery of four large horizontal warm-air heat generators.

Several interesting features have been worked out in the heating and ventilating of this building. In some classrooms, air tempered by passing over a battery of warm-air heaters is brought into the room through grilles under the windows on top of which grilles are wall-type radiators. Venting in some of the classrooms is accomplished through the wardrobes.

The warm air for the kindergarten is admitted through inlets in the ceiling. The exhaust vents at the floor line are supplemented by the fireplace.

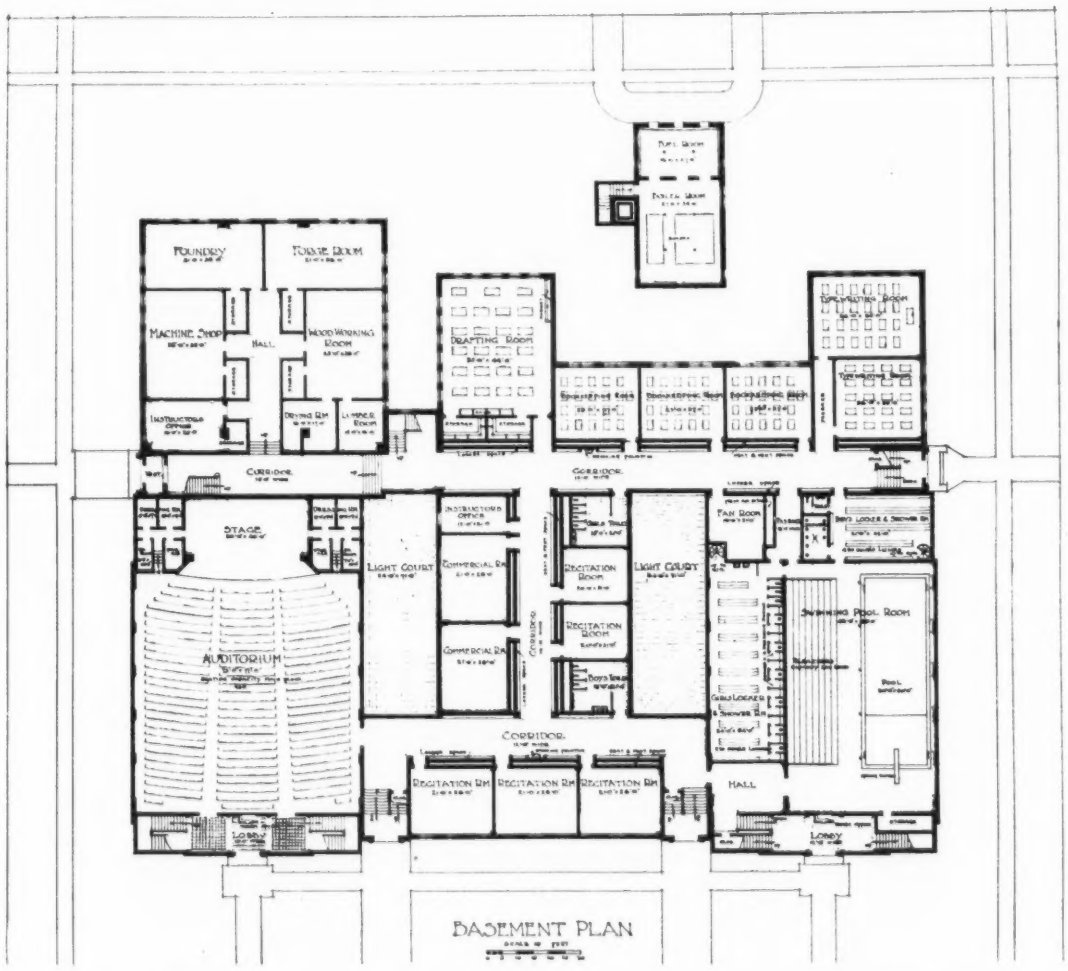
The gymnasium has windows running the full length on both sides. Warm air is blown upward past the windows from grilles at the floor line. Radiation is located above the windows. No radiators obstruct the gym floor and no ventilating ducts show.

Temperature and humidity throughout the building is automatically controlled.

The kindergarten has a fireplace with a large limestone mantel treated architecturally and forming a natural center of interest for the

TOWNSHIP HIGH SCHOOL, STREATOR, ILL.

Associates of A. L. Pillsbury, Architect, Bloomington, Ill.



TOWNSHIP HIGH SCHOOL, STREATOR, ILL. Associates of A. L. Pillsbury, Architect, Bloomington, Ill.

activities carried on in the room. The ceiling beams in the room are supported by corbels illustrating Mother Goose rhymes.

The building cost follows:

General contract	$231,420.33
Plumbing	17,961.71
Electric work	11,678.09
Heating	27,171.78
Ventilation	13,334.93
Heat regulation	3,917.00
Electric program-clock system	977.60
Total, exclusive of equipment and architect's fee	$306,461.44

The unit cost of the building figured on a total cubage of 817,865 cubic feet amounts to 36.9 cents per foot. The cost per pupil was $760.

Direct radiation in the rooms is provided by steam radiators. Warm-air furnaces have been installed for ventilating purposes.

Fairfield High School

The new community high school at Fairfield, Illinois, was erected in 1926 to accommodate 400 pupils. The exterior of the building is in buff brick in a wide range of shades, and is trimmed with Indiana limestone. The windows are rolled-steel sash of the reversible type. The design is rather conservative and the building represents a dignified structure and is one of the important public buildings in the community picture.

The building is fireproof so far as the corridors and stair system are concerned. Reinforced concrete floor slabs have been used, and finish floors are of terrazzo. The toilets also have terrazzo floors as well as wainscoting and partitions of the same material. The walls of all the corridors are furred out and provide recesses for lockers.

The ground floor contains an agricultural laboratory, manual-training shops and a drafting room, physics and chemistry laboratories, and a classroom.

The combination gymnasium and auditorium with its locker rooms and shower rooms, is entered from the ground floor. The room has a playing floor of 44'x75' and a stage measuring 20'x48'. There is a large bank of bleachers to accommodate spectators at games and exhibitions, and these bleachers serve also for regular seating when the room is used for auditorium purposes.

The first floor accommodates the commercial and domestic-science departments, and contains also offices and toilets for boys and girls. In the commercial department are rooms for typewriting, shorthand, and bookkeeping, while the domestic-science department consists of the domestic-science kitchen, pantry, and dining room, sewing room with fitting room and storage. There is one recitation room for general use.

On the second floor is a study hall 56'-6" x 71'-0", also boys' and girls' toilets, teachers' room, clinic room, and nine recitation rooms.

The building contains 549,860 cubic feet, and the costs were as follows.

General contract	$112,172.10
Plumbing	8,305.40
Electric work	6,765.26
Heating and ventilating	25,188.65
Total	$152,431.41

The cost totals above do not include equipment or architects' fees. Figured on the unit

SOUTH ELEVATION, MAIN STREET GRADE SCHOOL, BLOOMINGTON, ILL.

Associates of A. L. Pillsbury, Architect, Bloomington, Ill.

basis, the cost is 27.8 cents per cubic foot, or $380 per pupil.

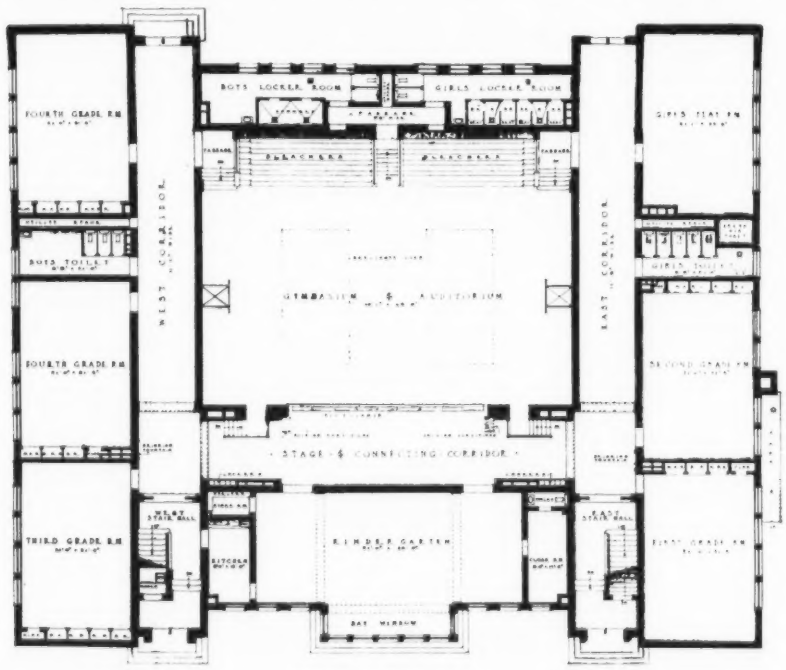
Streator Township High School

The new building of the Streator, Illinois, Township High School, erected in 1926, appears to be incomplete, but the lack of certain departments will be understood when it is said that the building is erected around one section of an old structure which is in excellent physical condition and which has been remodeled. Owing to the lack of funds, the board of education has not completed the auditorium, but it is the intention to do so later when funds are available and the needs for auditorium facilities have exceeded present accommodations.

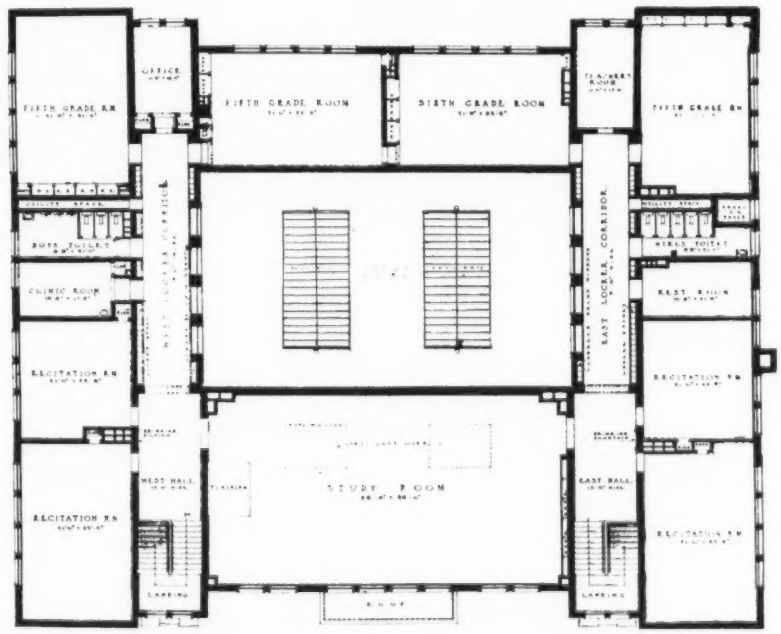
The old building which remains in use, has been arranged to care for the manual-training department, which includes in the basement, a machine shop, a foundry, a forge-room, a woodworking room, small offices for the instructors, a lumber room, and a finishing room. The central portion of the first floor in the old building has been converted into a locker corridor, 30′ wide by 55′ long, with six classrooms occupying the remaining space. On the second floor the central portion of the old building includes a lecture room, physics, chemistry, and botany laboratories, and a recitation room.

In the basement of the completed portion of the new building are a drafting room 35′ x 44′, easily accessible from the manual-training department in the old building, three bookkeeping rooms 23′ x 27′ each, two typewriting rooms 26′ x 35′, two classrooms for the commercial department with an instructor's office, five recitation rooms for general subjects, and boys' and girls' toilets.

The first floor of the new building has two study halls 36′ x 52′ each, a cafeteria 23′ x 46′



FIRST FLOOR PLAN.



SECOND FLOOR PLAN

MAIN STREET GRADE SCHOOL, SHELBYVILLE, ILL. Associates of A. L. Pillsbury, Architect, Bloomington, Ill.

NORTH ELEVATION, MAIN STREET GRADE SCHOOL, BLOOMINGTON, ILL.

Associates of A. L. Pillsbury, Architect, Bloomington, Ill.

with a large kitchen adjoining. The administration offices, with two waiting rooms and a large office for the superintendent and a private office for the principal, a library 21′ x 35′ are also on this floor. In addition there are girls' and boys' toilets, girls' restroom, women-teachers' room, clinic room, and four recitation rooms for general subjects.

On the second floor are two study halls, each 36′ x 52′, the art department with one main room lighted by skylights, 21′ wide and 42′ long, with storage room for drawing boards, art supplies, etc., and an instructor's office.

The domestic-science department on this floor consists of a domestic-science kitchen, 23′ x 37′, a model apartment consisting of living room, 14′ x 23′, dining room, 14′ x 15′, bedroom 10′-6″ x 15′-0″, laundry 7′ x 11′, a large pantry, and room for domestic-science lockers. This apartment is so treated and furnished as to provide a practical demonstration of the artistic possibilities of furnishing and decorating a home. There are also two sewing rooms each 21′ x 30′, with fitting room and storage closets. In addition to this there are boys' and girls' toilets, a room for men teachers and four large classrooms.

The center section of the new building at the front is carried up to a third story, with a complete department for music, including classrooms and instructor's studio, with practice rooms and a large band and orchestra room, with storage rooms for instruments and music.

The gymnasium runs up through the first and second floor and has a playing floor 45′ x 74′. Along each side are bleachers with a seating capacity of 850 and a balcony across the two sides with a seating capacity of 350, making a total seating capacity of 1,200. There are lockers and showers and dressing room for visiting teams, a physical-director's office, and a large storeroom for the storage of gymnasium apparatus. Access to this gymnasium is provided for the general public through a separate lobby with two stair systems. Over this lobby is a trophy room for the exhibition of trophies.

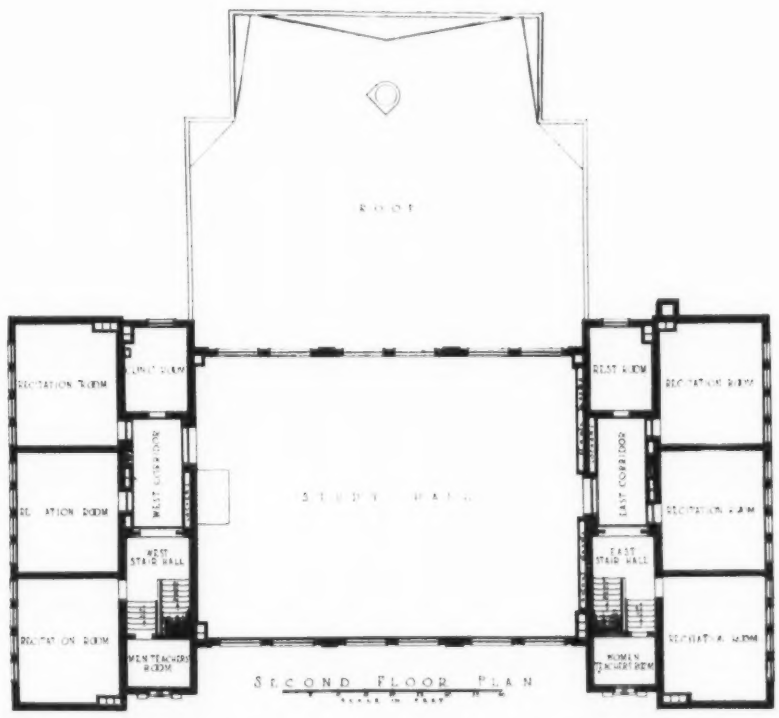
The auditorium as planned has a seating capacity on the main floor of 950, with 250 in the balcony, making a total of 1,200.

The construction and finish of this building are of the best. It is fireproof throughout, all floor slabs being combination concrete joist and tile. The finish floors of all corridors and stair systems are terrazzo, as well as terrazzo floors, toilet partitions and wainscoting in all toilet rooms. The finish floors of all classrooms are maple. All interior trim is of oak, except the domestic-science department, cafeteria, etc., which have enameled woodwork. The floor and base of the cafeteria and kitchen are terrazzo. All walls are plastered with sand finish, colored plaster so that no further wall decorations are necessary.

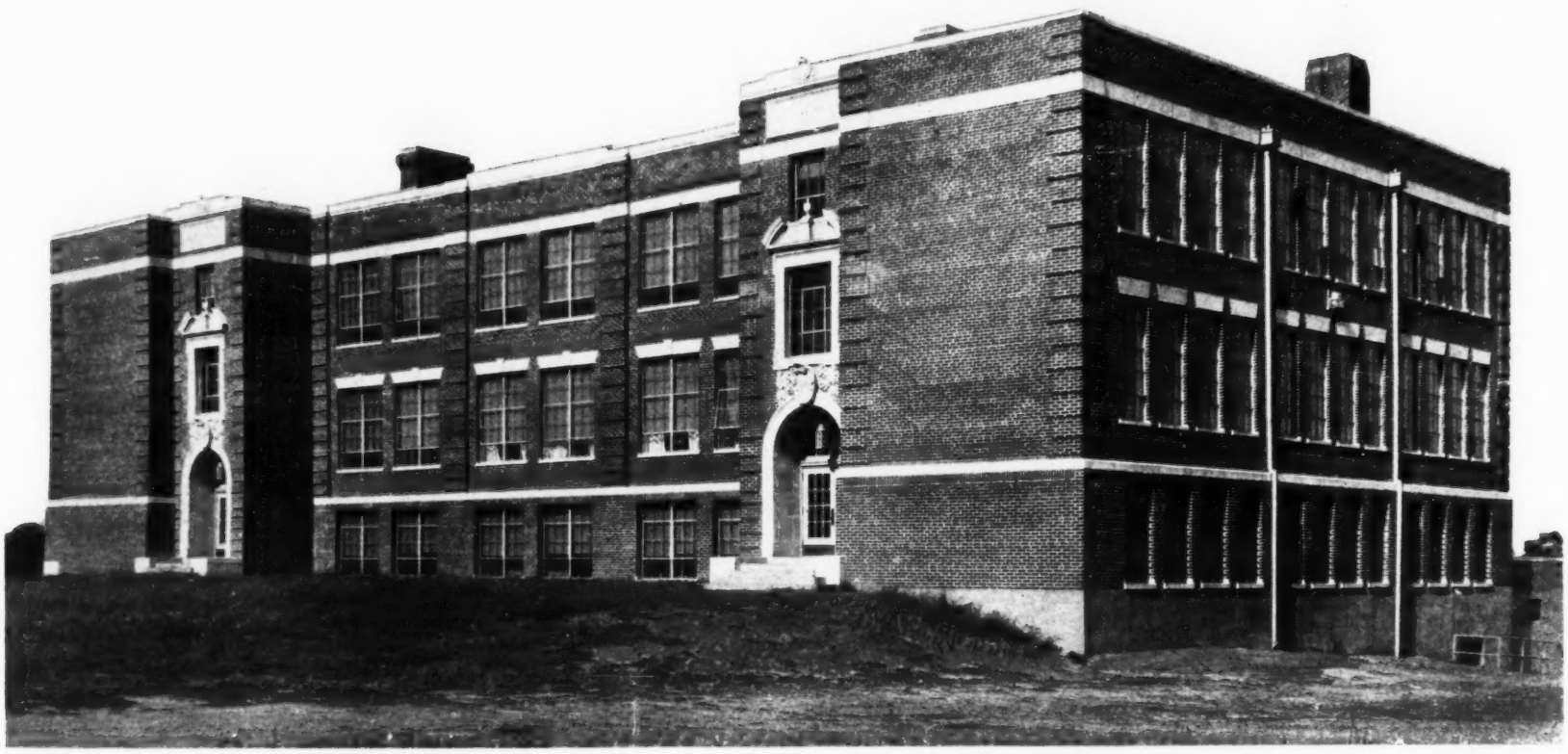
A separate boiler house has been erected to accommodate the heating and ventilating apparatus for the entire group.

The new building, exclusive of the auditorium, has a cubage of 1,849,000 feet. The cost was as follows:

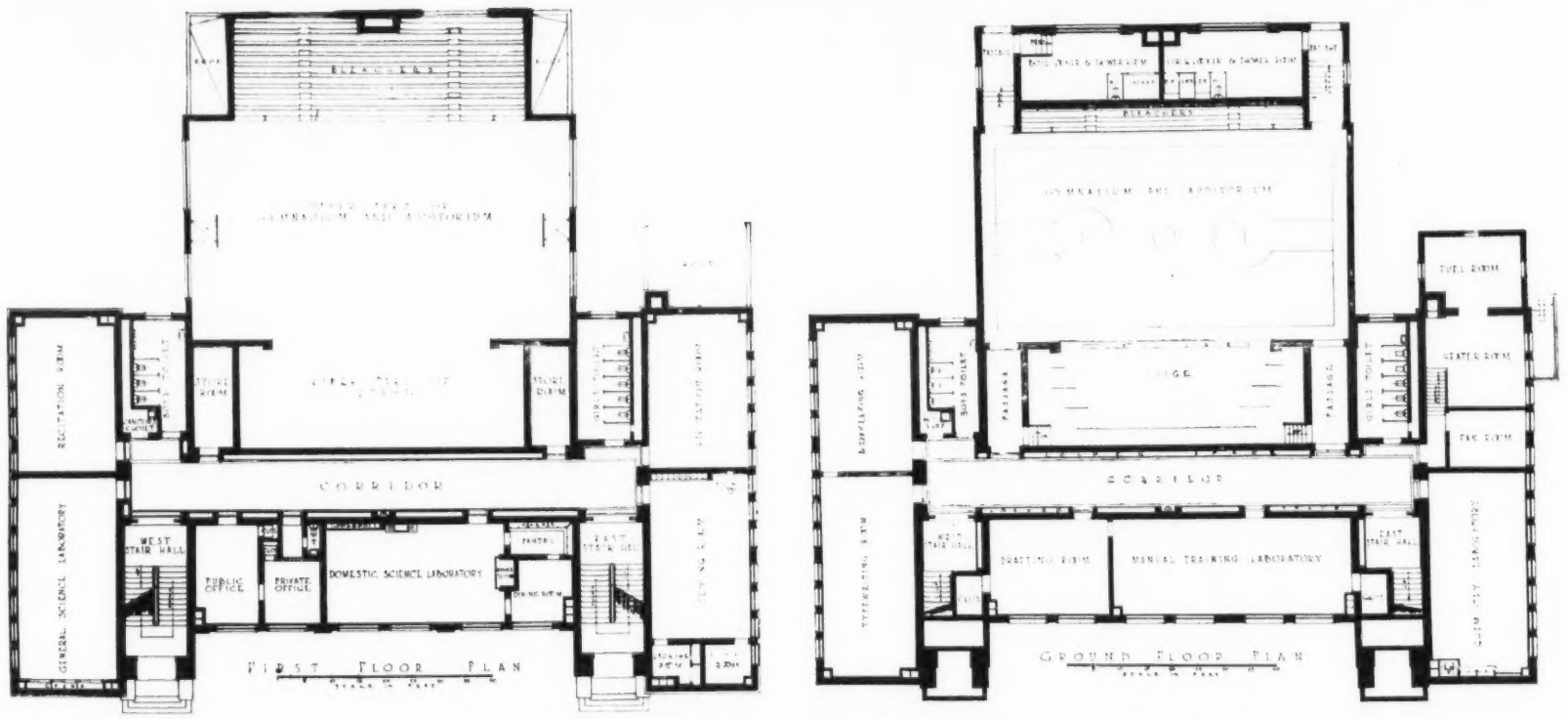
General contract	$365,000.00
Plumbing	22,436.00
Electric work	18,968.17
Heating and ventilation	72,574.46
Equipment, exclusive of auditorium	30,297.00
Smoke screens	2,000.00
Sewers	7,300.00
Completion of swimming pool	7,500.00
Total	$526,075.63



CHESTER HIGH SCHOOL, CHESTER, ILL.
A. L. Pillsbury & Associates, Architects, Bloomington, Ill.



CHESTER HIGH SCHOOL, CHESTER, ILL. A. L. Pillsbury & Associates, Architects, Bloomington, Ill.



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The cost of the auditorium as planned will be $55,000 for the general contract and $18,950 for the heating, plumbing, and wiring.

Reducing the costs to a unit basis, the main building, exclusive of equipment, cost 26.8 cents per cubic foot, or 28.0 cents per cubic foot with equipment. The unit cost of the auditorium will be 17 cents per cubic foot complete. The cost of the entire building, therefore, completed, will be 26.3 cents per cubic foot.

The building as now designed accommodates approximately 800 pupils and the cost on this basis is $750 per pupil.

The Shelbyville Grade School

The front, one side, and the back of this building face important streets, and for that reason the architectural effect of the back and side has been formally treated. The building was completed in the Fall of 1926 to accommodate 545 pupils in the kindergarten and first six grades. A separate section of the school is devoted to a study hall 36'x66' and four recitation rooms for the accommodation of the seventh and eighth grades, which are organized on the subject basis.

The kindergarten, which is on the south of the building, measures 21'x50' and has a large bay, with French casement windows, for the circle. A kitchen, a storeroom, a cloak-room, and toilet have been provided adjoining this room so that it may be used for various evening social purposes. On the first floor the largest room is the gymnasium-auditorium, which has a playing floor of 40'x69', and a large bank of bleachers for spectators. The space under the bleachers is utilized for boys' and girls' lockers and showers. The floor level of the gymnasium-auditorium is 3' 6" below that of the main floor line and the arrangement is such that the main connecting corridor serves as a stage. Folding partitions are so installed that this corridor can be shut off from the large room when it is not required for stage purposes. Six classrooms and boys' and girls' toilets are also on this floor.

Two fifth-grade and two sixth-grade rooms, a study hall, and four recitation rooms are located on the second floor. Toilets, a rest-room, and a clinic are also located here. The corridors of this floor have lockers to accommodate the wraps of the seventh- and eighth-grade pupils. In the lower grades the pupils' wraps are cared for in Evans Vanishing Door Wardrobes.

All corridors and stair systems are of fireproof construction with terrazzo finish. The toilet partitions, the wainscoting in the toilets, and the stair halls are also of terrazzo. All classroom floors are maple and the wood trim throughout the building is yellow pine, stained.

(Concluded on Page 151)

The Big Issue in Schoolhouse Ventilation

Experts Voice Opinions at Recent National Conference

The science of ventilation which has been developed during the past quarter of a century to a high degree of service and utility has in recent years reached a controversial stage. Experts are no longer of one mind as to the merits of this or that system. The utility of the elaborate systems which have found their way into the schoolhouses of the country, and which aim to control air movement by mechanical means, has been questioned. The open window has its defenders, and the unit system its champions.

In the light of this general statement, the recent convention of the American Society of Heating and Ventilating Engineers assumes more than ordinary importance. The experts on the subject were there and presented their views on certain phases of the subject with remarkable thoroughness and clearness, but avoided direct debate on the relative merits of the several systems.

We are concerned here, however, only with that phase of the discussions which deals specifically with schoolhouse ventilation and it is our purpose to lift out of the several addresses for publication only such parts as may be of interest and value in the school field.

Some Practical Aspects of Ventilation

An expert had visited, inspected, and checked up over 400 school plants, ranging from the little one-room country school to the cosmopolitan high school, from ordinary stove heating to a complex plant including air washers and filters, ozonators, violet-ray machines, etc. He had inspected the jacketed stove installed by the county school-board members as well as the fine mechanical plant installed through the best engineering service. So far as variety and number of heating plants were concerned, he had a vast experience behind him. This man was H. W. Schmidt, supervisor of buildings of the department of public instruction of Wisconsin.

Mr. Schmidt proceeds upon the conviction that the rural-school official aims to provide heat and cares little about fresh air, and expresses surprise that so little thought has been given to the value of ventilation. Much education, he believes, is here needed. He then touches upon the failure of large plants and says:

"The fact that an elaborate and efficient equipment for heating and ventilating is provided in a school is no criterion that it is either properly or consistently operated. Case after case can be cited where a split system is used as a gravity job because it costs too much to operate the fan; or where the same system is used as a direct-heating job, there being enough direct radiation supplied to make up for heat losses. Air washers and filters are in many cases 'ornamental as well as useless'—it costs too much to operate them. Gravity indirects are usually both a delusion and a snare; the direct radiation is nearly always sufficient to do the heating and so the indirects are cut off. And by the way, I have seen hardly a job of this kind which would function properly. The steam jobs are not the only ones in trouble. Hot-air-fan jobs are quite consistently operated as gravity jobs by using the by-pass dampers and then, 'the furnaces are no good,' or 'a pipeless furnace is the only thing,' etc."

Standards of Practice Necessary

"I have no quarrel," said Mr. Schmidt, "with those who believe that 10 cu. ft. per minute per occupant is sufficient air supply, nor with those who believe that 30 cu. ft. is correct; nor with those who believe 75 per cent of fresh air is proper while others believe 25 per cent is correct. Neither can *prove* he is correct. So far it is a matter of opinion based upon experience and judgment. Much of present-day practice is thus based upon empiricism and it is to the credit of the engineering profession that the members are not satisfied with what has been accomplished but are constantly striving for new light upon matters which are still subjective. Progress comes only through 'dissatisfaction' and even the 'window ventilators' may produce some good in *strengthening* the basis of those who believe in 'controlled air conditioning.'

"Standards will be changed from time to time as evidence is gathered that new conditions or devices produce results which are more satisfactory—such is progress. In the meantime it becomes necessary, as a practical matter, to set up certain standards to govern heating and ventilating installations in spite of the fact that certain individuals argue to the contrary.

"I have found three classes of opponents to authority: *first*, those who believe in liberty, whatever that means; they are usually those who wish to do as they please, with very little rhyme and no particular reason; *second*, those who resent any semblance of authority just because it is authority and for no other reason; and *third*, though not least, those, usually engineers, who do not believe the standards set up by authority are proper and who fear that such autocracy will hinder progress because of inflexible standards. The latter class is the only one whose opinions are worth considering as these opinions are usually based upon honest differences and offered in a fair spirit. From an engineering standpoint such wide open policy may be acceptable, from a practical working basis this is not so evident. If all jobs could be given the best kind of expert service in their layout, and if all jobs were subject to some kind of *good* engineering practice maybe 'all would be well in Canaan'—the inexpert would soon starve. But unfortunately all jobs are not so treated and the layman, from architect down to the general-store clerk at the crossroads tries his hand at designing heating and ventilating plants. I am not exaggerating. I have seen such jobs, both on paper and in actuality.

"It may have dawned on you by this time that I am defending codes governing heating and ventilating. I am. I have seen enough poor jobs to make me a believer in some sort of authoritative standards. And so do most of you if I am to believe the many expressions in the press and to me personally, anent such codes as the Wisconsin Code with which many of you are familiar. These comments range from 'pernicious,' 'antidiluvian,' 'impossible,' 'thorough,' 'rather good,' 'sensible,' and 'fair,' to 'excellent,' 'fine work,' 'splendid.' I suppose all three classes of individuals mentioned previously, are represented here among these comments. And by the way, gravity window ventilation, is not even mentioned in this code and prohibited by inference. In spite of statements to the contrary, the Wisconsin Code is not inflexible and I believe others are in the same class. Any order may be changed or modified if reasonable arguments are presented substantiating the proposed changes. I am making this statement at this time to show present day standards are not necessarily fixed nor arbitrary and that a code, governing in general, may not be 'pernicious,' in its application. A code *does give better heating and ventilating layouts, as a matter of practice, than if no standards were set up.* Field observation proves this.

Something About Closed Windows

"I am not at all sure that the edict, 'keep windows closed,' used as an operating slogan in a split or blast system, is at all times defensible, especially if weather conditions are favorable. Yes, I know that resultant loss of so-called back pressure is supposed to furnish too much air in those rooms where windows are opened, thus robbing other rooms of their measured supply. It is doubtful if in practice this is so vital that a teacher may be threatened with dismissal if she opens a window. 'Unbalancing' is apt to be a pet phrase which in practice has less value than is usually conceded. Last spring I tested a certain building whose rooms were being served with the much discussed 30-cu.-ft.-per-minute-air-supply-per-occupant at a rather high velocity. The exhaust air in the 10 classrooms, measured at the vent openings, did not exceed 32 per cent in any one case varying from 21 per cent on the lee side to 32 per cent on the windward side. This was a new building, well constructed and apparently tight. I don't know where the other 70 to 80 per cent went to unless window and door leakage accounted for it, as it must have, of course. An open window would have made little difference here. (It was not a recirculating job.) These figures are of course not exact, in fact cannot be, as even with integration, air volumes at outlets cannot be measured with scientific exactness under practical operating conditions.

"The unit-room ventilation has also received its share of attention at our hands both as regards installation and operation. I shall have to confess that in practice, well installed units have proved perfectly satisfactory and have delivered their predetermined volume of air at proper temperature. The factor of noise is in most cases negligible, in fact I have seen, or rather heard, plenum systems much noisier than the room units. Manual room control of both air volume and temperature is, as a rule, unsatisfactory as the teacher is busy in other directions and forgets all about it. On the other hand centralized janitorial control must also be watched as I have often found the units run at much reduced speeds to save fuel and operating expense (some direct radiation was installed). Automatic control of these units should be insisted upon, as well as provisions for air filters. This latter is of considerable importance in many cases as the air is taken directly into the unit and oftentimes quite close to the ground. I know of a case where grit entered a classroom so that one could not only see the dust but taste it. In a central plenum system this is not so likely to occur as the velocity of the entering air reduces usually sufficient to get rid of the grosser impurities before these pass into the fan. The systems' serious drawback is the lack of well-controlled humidity supply. This problem may eventually be solved."

The Contribution of Engineers

Edwin S. Hallett, chief engineer of the St. Louis, Mo., board of education, held that "The matter of ventilation has loomed up as a subject of first importance, not because of a personal controversy between individuals or organizations but because public attention has been focused upon new facts that have come out of research in many quarters. More progress has been made in the actual building of ventilation, considering its effect on vital statistics and in commercial awakening, within the past six years than has occurred in the history of the world before.

"We may be headed for a single control on radio but we are in for three dials on schoolhouse-ventilation control as yet. We hope to 'gang' the controls of temperature and humidity but so far a successful humido-thermostat has not been put on the market. The two separate instruments are installed together, each having a fixed arbitrary setting.

"The air motion control is the subject of greatest divergence and the one to which the writer has given much time and study to obtain practical and reliable operating results. A later paragraph will be devoted to this subject.

"Continuing with the synthetic chart, the column of bacteria is of much interest. As our scientific knowledge broadens, the wonder grows that we are able to survive the onslaught of disease germs. Putting oil on the mosquito in the tropics lifted at a single stroke a great plague from the world. Pasteurizing milk has put an immense multiplying force in the population of the earth.

"The public has recognized the necessity of bacteria-free food and water and the diseases from these sources have disappeared. But as to the air to breathe they have not done their duty. They are still paying the high price on city-poisoned air, in the high death rate from tuberculosis and other respiratory diseases. Complete mechanical ventilation is the answer and is the only answer that can ever be effective.

"The column of 'other substance' refers to a class of injurious substances even more serious than bacteria; that is the air poisoning from sulphur dioxide and carbon monoxide. All coal burned in the heating and power furnaces contains large percentages of sulphur. It is so strong as to be actually irritating to the mucous membranes and is the cause of great injury to plants.

"It is easily discernible that delicate plants are seriously injured by such sulphur fumes, yet children are injured more than plants are. The new menace to life is the insidious carbon monoxide of the automobile exhaust. All the readers of this paper well know the peculiar affinity that carbon monoxide has for haemoglobin. Complete asphyxiation is not necessary to leave serious injury. Chemical tests in a school for such poisons are not effective because of the low concentration. The problem can better be met by installing a system of ventilation that washes all such poisonous gases out of the air.

"Odors in a school, which originate either in the school or out of it, are destructive to good school work. The writer's attention was called to the 'terrible odors' that came from the wraps of the children being hung on hooks over wall radiators in a portable school. The heat of the radiators rose through the clothing and filled the room with unspeakably bad smells.

"The nearby packing house can be no worse than this accentuated instance. No window ventilation will in any manner alleviate such odors—nor will a

good fan system remove all of them. It requires the oxidizing or burning of this odor stuff, which is too minute to be measured by either chemistry or microscopy.

"A further check on the standards for good ventilation is the writer's well-known reference to nature's pleasure spots. People are apt to think that nature has surpassed anything that science can invent. Whether or not that be entirely true, the serious duty is laid upon the engineer of conditioning the schoolroom air to the nearest possible approach to the delightful outdoors in those favored places. It must be noted that the air chart is capable of defining exactly every desired quality of such good air. It is, therefore, not an artificial but a natural standard that is being accepted for our guidance.

"The writer is answering this challenge not by profuse verbiage but in the construction of heating and ventilating plants of full size, filled with normal pupils through years of daily school exercise. Both grade and high schools have been built recently in St. Louis with this strict purpose in view.

Temperature, Humidity, and Air Motion Control

"These three elements of ventilation must be combined in one process in the all-blast system. The heat must be incorporated in the air before it is available. The thermometer's indication of temperature is not that of the pupil. Both the humidity and air motion alter the heat sensation and in practice any change in one of the three must cause a correcting change in one or both of the other two. If the humidity rises, the temperature must drop or the air motion must be reduced. At this time no coordinating control is available so the engineer uses constant setting for each.

"The serious problem has always been to secure skilled operators to supervise mechanical ventilation. In fact where radiators are installed in classrooms no means has been discovered by which the fan system could be kept in motion. The split system or dual system has been the direct cause of most of the criticism of blast-fan ventilation. The writer set out to design a new type of ventilation that should be so direct and simple and easy to operate that the service could be maintained at perfect control at all times.

The Vashon Intermediate

"A brief outline of the salient features of this system is herewith given. In a school that will house 2,000 pupils in day sessions with an ample auditorium, a high-pressure, steam-electric plant is installed as the cost of electric current from the public-service company would cost more than the total fuel for all purposes. The air is heated by cast-iron vento coils set facing the distribution tunnel which follows under the corridor system. New efficient fans are used, two in number, either of which would serve in case of accident to the other. A new control desk has been devised to centralize all control at a point so that the engineer has a hand on the pulse of the school at every moment. Long distance thermometers like the caliscope are used to read temperature and humidity in various parts of the building. Delicate air gauges are used to indicate the air flow in the main ducts. All steam valves in service are either in the engine room at a convenient position without ladders, or are closed by remote air control. Exhaust fans in the attic for toilet rooms are started by remote electric control. The great lunchroom for this school is ventilated by an exhaust fan which discharges under the stoker so that the heat and odors of that air are consumed in the power furnaces. The standard air washers are used, with a special row of scrubber nozzles housed in at the top to keep down humidity. Spray nozzles are sometimes used on humidostats."

A Schoolhouse Architect Speaks

William B. Ittner, the well known schoolhouse specialist, discussed ventilation from the standpoint of the architect. He held at the outset of his discussion that "Expert opinion has shifted to the position that the spread of disease by any means other than actual contact is highly problematical, but human suggestibility is strong and popular preference for washed, deodorized, and freely circulated indoor atmospheres is still to be reckoned with.

Mr. Ittner, whose experience on the subject covers a long range of years contends that:

"The transition from plenum system supply of superheated air to the delicately adjustable split systems now in vogue is the engineering expression of changing scientific viewpoints between negative health protection and the creation of positive optima for health. Engineering is an exact science. Medicine is an art. When health consciousness demanded clean air in measured quantities, the plenum system of air control was devised. Air drawn from the outside was passed over coils and heated

GEORGE C. CARROLL,
Terre Haute, Ind.

Superintendent-elect of the Terre Haute, Ind., schools chosen to succeed Superintendent J. O. Engleman, whose term expires July 1, 1927. Mr. Carroll is at present the principal of the Wiley High School of Terre Haute.

to a degree that, when delivery was made through room inlets, would heat the rooms to the desired temperature. Constant results were difficult because of heat losses through walls, windows, and ceilings. Air overheated carried reduced oxygen tensions and regulation often involved undesirably rapid fluctuations. Heating and ventilating were inseparable. The need for economy in operation and constancy of control led to the development of what is called the split system. Low-temperature coils provide room radiation to offset heat losses from walls and windows. Air ducts under fan control deliver moderately-heated air. Dual regulation permits temperature control to a very precise degree without sensibly disturbing the occupants of the room. Air currents under fan control can deliver air at any desired speed or temperature. In the hands of competent engineers, closely cooperating with school architect, properly designed units, operated by competent persons, optimum air conditions are uniformly achieved.

Engineers Have Developed Control

"Engineering and not medical science, then, is to be credited with the discovery and modification of discrepancies in early types of mechanical-ventilation systems. The modifications, it will be noted, have been chiefly in the direction of regulation downward of excessive temperatures and in the direction of precise control. Air conditioning was a development incidental to local demands because of odors, dust aridity, or other objectionable features. The fundamental engineering problem has been to secure suitable temperatures independent of prevailing outdoor conditions, and air movement without draft. Controlled methods have everywhere superseded haphazard experiment. Whatever the agreed optimum for health, the architect and engineer can supply it. Any air velocity; any temperature range; constancy or variability in heat, humidity, or other conditions; aggregate or unit control; whatever the health specification, good design plus intelligent operation of mechanical plant can achieve it.

"It is interesting to observe that medical confirmation followed and did not precede the engineering development which made temperature regulation the criterion of effective ventilation. The memorable investigations in ventilating practices sponsored by the committee on ventilation of the British Medical Research Council had a health objective but they did not introduce a single new element other than to discover through the most extensive and the most carefully controlled field work ever undertaken in this field that air velocities and atmospheric cooling power correlate much more closely with bodily comfort than does the relative humidity index. The chief contribution of these serial reports is a technic of observational method and the invention of the kata-thermometer which facilitates multiple readings in all parts of a room and the computation of air velocities through comparison of wet and dry bulb readings. The British Committee findings favor lower room temperatures than commonly prevail, but they claim no finality except in giving direction to future studies.

"The New York Ventilation Commission, apparently less afraid of generalization, defines 66.2 deg. as the maximum temperature for the health of school children and assumes an engineering prerogative in declaring that this 66.2 deg. fahr. shall be maintained by the open-window gravity-exhaust system.

"The school architect can have no quarrel with the health expert on the basis of revising room temperatures downward. He may think it absurd to hold that fluctuations of a degree or more in either direction from the given figure will produce epidemics of respiratory disease or otherwise seriously interfere with the health of this or succeeding generations. His chief contention is that effective compromise shall be reached between medical and school authorities, that the medical wing of school administration shall fix acceptable standards, and that medical controversy shall be confined to medical groups. Conversely, the engineer and not the health expert must deal with exclusively engineering problems in connection with the maintenance of health optima. Mechanical ventilation is controlled ventilation. Window ventilation is uncontrolled ventilation. Every installation is a new problem for engineering skill. Any formula is a fallacy. The open-window formula was tried and found wanting years ago, and contrary to its popular propaganda, the complexities and costs of its apparatus and management are far in excess of the mechanical system it seeks to supersede.

Mechanical Systems Not Infallible

"Mechanical systems are not infallible. They are proof against incompetent manipulation. Mistaken economy on the part of school officials sometimes curtails the air supply. Ignorance of ventilation requirements, so gross in some instances as to operate the fans in reverse or to discontinue their use altogether, often causes criticisms attributable to no engineering fault but to lack of popular education in matters of air hygiene. What the protagonists of window-gravity ventilation condemn in outgrown or badly operated ventilating systems, engineers and architects also condemn. Much collaborative observation by competent and dispassionate observers is yet to be made before the final word on school ventilation can be spoken.

"There is, however, one constructive influence steadily at work which has been persistently ignored in the present controversy. The report of the New York Commission on Ventilation contemplates a plan of school administration which holds pupils in fixed units from nine in the morning till four in the afternoon, with certain intermissions, while schools which represent modernity in education now operate on a flexible educational plan that keeps pupils in their classrooms only one third to one half of the time. Only the classroom needs to be kept at relatively high temperatures. The rest of the day is spent in the less formal special-activity rooms where the air is cooler and full freedom permits the children to move about as they are impelled to do when temperatures fall or air velocities increase. Muscular activity is a far more efficient adaptive system than even the heat regulating mechanism of the skin, which tends to flood the skin with the circulating blood at the expense of internal organs and brain. It is true that some communities still tend to modernize the high and secondary rather than the elementary schools, but such failure to recognize the mind-body growth necessities of elementary-school populations is the fault of neither architect nor health expert. It is interesting to observe that the present contention on ventilation necessities is still confined to expert groups. There is as yet no popular enthusiasm for cold air or other health objectives. Education is no short cut to reform, and we are reduced to that method or none to popularize science.

Individual Reactions Important

"There is a fair degree of agreement that optimum temperatures for health are lower than that indicated by the popular index of comfort: that the sick, the malnourished, and the aged thrive in temperatures unfavorable to the mind-body growth requirements of the healthy child. One of the less well appreciated aspects of modern flexible school-administration systems is that they favor the segregation of the fit from the unfit, and that they encourage a freedom of movement which tends toward the toleration of cooler atmospheres. This promises the very desirable end that the sanitary standards to be adopted shall be the optima for normal children. Statistical data from pathological groups are beside the mark.

"Hygienists have explained that room temperature should not exceed 68 deg. fahr. with percentages of humidity not under 30 nor over 60, with air movement sufficient at all times to maintain its cooling power and gently remove the air blanket that envelops the body and tends toward eventual discomfort and health menace from cumulative body heat. The human body is a combustion mechanism, burning its fuel and giving off every hour enough heat to raise to blood temperature a volume of 30 cu. ft. of air introduced every minute at room temperature of 68 deg. Thirty cubic feet of air then has been given as the minimum of air supply per minute. If air movement and cooling power

(Continued on Page 141)

Statistically Speaking vs. Pictorially Presenting

Arthur J. Peel, Consulting Accountant, Boston

In a day when policies and developments are so largely determined on the basis of figures and mathematical comparisons, it is important that the basic facts should be presented in a manner that will not only arrest *attention* but will carry on to the point of *interest,* then to *desire* to improve or correct the situation represented, and finally, to secure *action* which will bring about the desired result. If all school year books and reports were prepared with these four essentials in mind, I think they would find many more interested readers, and result in quicker and more satisfactory response from legislative bodies. A public school department yearbook may be—and should be—the most interesting piece of public literature issued by a city, town, or district.

It is quite probable that to the majority of the readers of THE SCHOOL BOARD JOURNAL, any school report is of interest and we willingly wade through pages of text and tables of statistics, because we know that no report is too poor but that it can yield something of interest to the public school enthusiast. Nevertheless, we are often conscious of the fact that to the lay mind, many reports are as dry as dust and mean little or nothing in the consciousness of the "man in the street." And yet, these are the people to whom we have to *sell* the idea of education; and it isn't sold *once,* it must be sold to them every year, if public education is to progress with the need.

During the past few years, and more recently during the past weeks, I have studied intensively many school reports and yearbooks, and each one has been of more than passing interest. And yet, I know that few of them are read with the degree of application that the subject matter calls for from those who should be most interested. What can be said of a member of a school board who says, without apology even, "I never read these things; I don't understand most of these tables of figures. If I want to know anything, I ask the superintendent." If members of the school board can speak thus, is it any wonder that the taxpayers seldom have a clear conception of where their school dollar goes?

However high our ideal we must perforce deal with "things as they are," and since the majority of public school yearbooks are not read as extensively as they should be in consideration of all the work involved, it may not be amiss to give a little thought to the production of yearbooks that are built up in accordance with the fourfold principle already mentioned—*attention, interest, desire, action.* This may sound like a formula for constructing a piece of advertising "copy"; this is precisely what it is, for the school yearbook issued by the school department is the greatest piece of civic advertising that comes off the press.

Every school superintendent is *de facto,* or *de jure,* a statistician. Now, there is only one thing that will save a statistician from being a hopeless bore, and that is imagination. This may seem like a paradox since public confidence in statistics exists only insofar as they profess to give us *facts.* What I want to convey, however, is this thought, that it is only when facts are presented by someone with an imagination, that they stand a chance of accomplishing the purpose for which they are compiled, as a rule.

So that I may not be accused of failing to practice my own preaching, and also to prove that an ocular demonstration is worth a deal of verbosity, let us examine some methods of graphically presenting some interesting figures which, in the form of cold statistics tabulated in columns and sections, would fail to arrest the attention of the majority of ordinary people who "hate figures." I have found in some school offices that there exists a need to simplify thinking processes. What is perfectly simple and obvious to the schoolman is not usually so simple to the majority of the people whose taxes make his work necessary and possible. For example, to think in terms of "the school dollar" is one way of getting a story across, which would otherwise languish for lack of interest. This is becoming a common practice with many school offices, and in various ways it is graphically illustrated. For example, the superintendent of the Wellesley public school department, has used a column marked off into a hundred equal sections. By means of diagonal lines he shows just the proportion of the column taken by each class of expenditure; on a percentage basis, of course. This serves its purpose, yet it lacks that degree of originality that would make it all-compelling. I have taken the liberty of using Dr. Graves's own figures, presenting them in another way which, I think, might attract a little more attention. Remember we are dealing with a school *dollar;* then let us make it a real dollar, a silver dollar—the old "cart-wheel" dollar. In the chart marked A, I have attempted to carry out the idea, using the divisions of expenditure shown in the Wellesley school report. Of course the ideal plan of picturization is by the use of different colors, but the limits of reproduction in the form of a cut, made it necessary for me to use various patterns for each section. It is well to bear in mind that the predominant purpose of charts of this character is to attract *attention,*

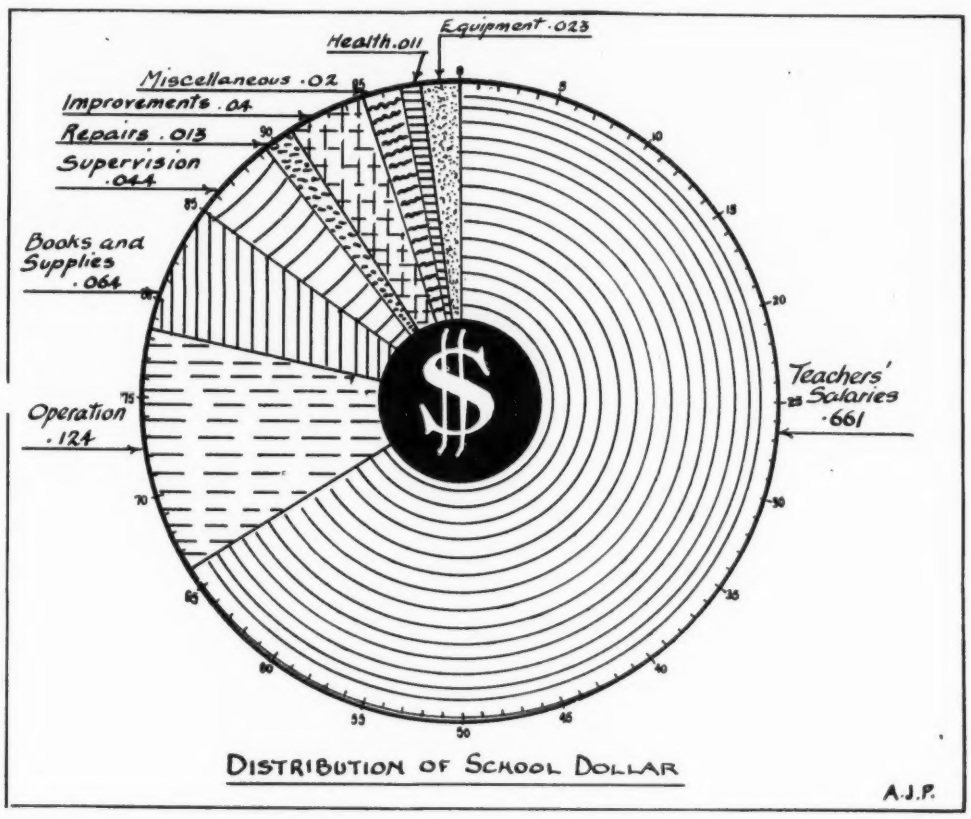


CHART A.

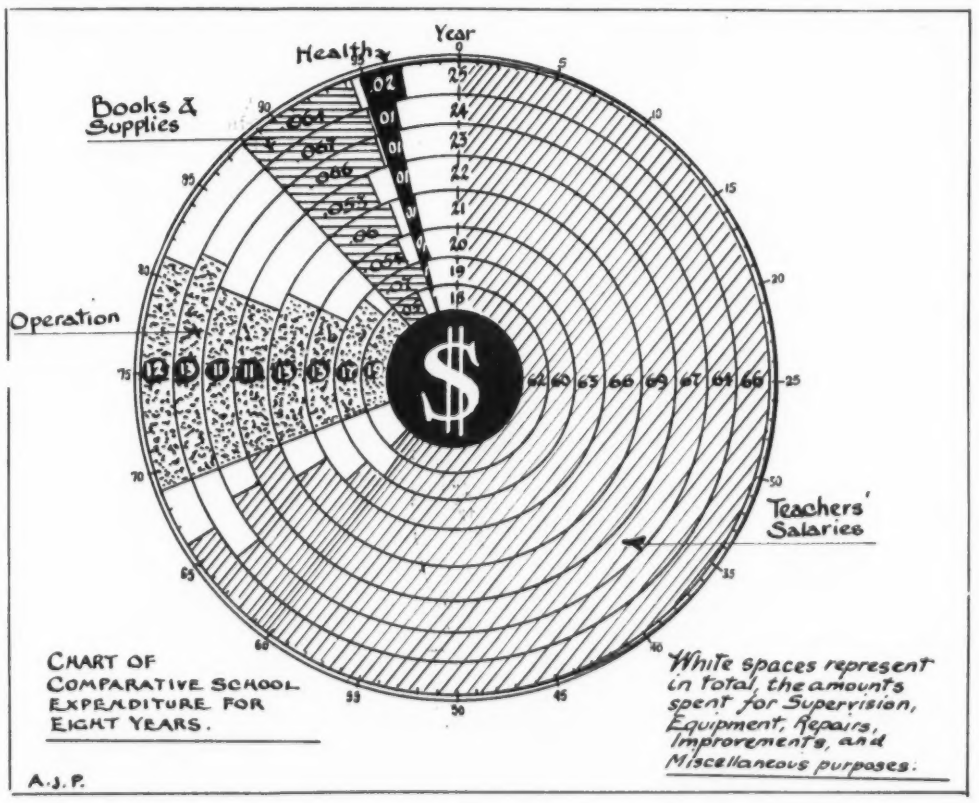


CHART B.

and for this reason we must dare all sorts of combinations and innovations, consistent with good taste.

A very common and valuable method of presenting school statistics is by yearly comparison, showing the increase or decrease of classified expenditures from year to year, and over a period of years. In examining a number of these tables I have noted how difficult it is to get a clear picture of what particular form of expense has increased or decreased from year to year, and to what extent has been that increase or decrease. In chart B I have indicated just how this may be done, using the same idea of the school dollar. It will be noted, however, that this method does not permit a picturization of the manner in which a *hundred* cents have been expended, but only of the main factors of cost. To show the entire cost by this means, would throw comparable factors out of relation to those same factors in preceding and following years. To illustrate the ease by which a chart of this type may be read, we see at once that in 1922 the expenditure for teachers' salaries reached a maximum, but that this high expenditure was offset by the minimum for operating expense; a very healthy condition, incidentally. It is just such factors that start people thinking, and I know of no better way by which these may be brought home to the lay-mind than by pictorial presentation. There is a danger, of course, in attempting to show too much in one chart. To do this is simply to add confusion to confusion. But, on the other hand, scientific charting makes possible visual comparisons that can never be shown in statistical tables, in a manner that will arrest attention without close application on the part of the reader.

A very common, but none the less effective method of showing the progress of expenditures, is by means of "curves" such as is shown in exhibit C. In the example used, I have translated the expenditure into strictly *functional* classes, that is, combining salary cost with other costs of tuition in order to arrive at a *cost of instruction*. This is helpful and valuable, and I am of the opinion that for functional charting the "curve" is preferable to the method used in chart B.

Another form of graphically presenting relative costs is indicated in exhibit D. This chart is self-explanatory and is designed to stimulate the query *"Why?"* It gives just enough information and comparison to stimulate further investigation. Why does it cost more to educate a child in School C than it does in School E, for instance? From such basic information may be developed a whole

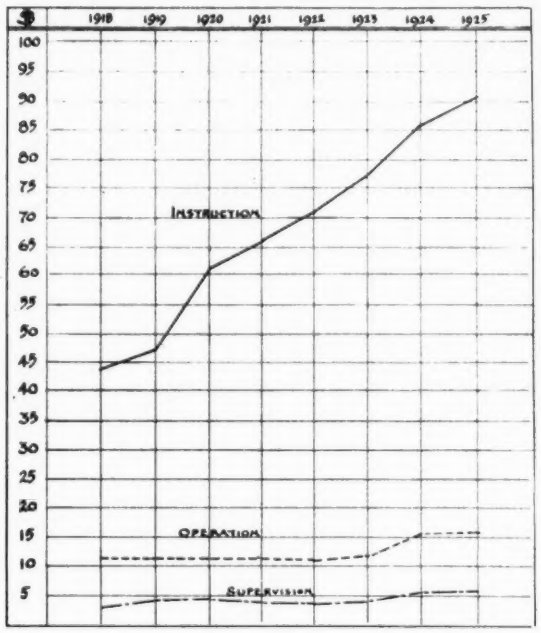


CHART C.

series of charts along the line of A and B, but for *individual* schools.

One of the most important aspects of public school administration and class instruction, is that of *per capita* and *per pupil-hour* costs: first by cities, then by schools, classroom, and subject. These factors are very sensitive and vary considerably from month to month at times; in other words, they are typically barometric in character. Very well, then, let us show them as barometric, and use the appropriate form of charting. In chart E, I have taken some actual school costs and used them to illustrate just how these may be shown in a manner that will create interest in the thought of many people who might otherwise pass them by and fail to realize their significance. The possibility of subdivision and extension of this method of charting is almost infinite, depending, of course, on the amount of detailed information developed by means of the cost accounts maintained in the superintendent's office. While the development of *annual* figures is of value, a great deal more service may be obtained from graphic picturization of cost factors, *month by month*.

In order to illustrate just what this means let me quote an actual case which happened in a school office with which I am familiar. It is the practice in this office to prepare monthly charts similar to that shown here as exhibit E for subject instruction. The cost per pupil-hour for science subjects was naturally higher than for other subjects, due to the cost of equipment and material necessary for experimenting purposes and so forth. Before monthly cost statements were prepared and charted, the actual cost for instruction in science was known as a general average, and requisitions for supplies were put through and passed without any independent check apart from the fact that they looked reasonable. After the monthly cost figures were put into effect, it soon developed that the cost of the science classes was creeping up month by month, and this started a thorough investigation, with the result that it was discovered that material was being wasted, and, in some cases, probably stolen; this meant that orders for supplies and material were being slightly increased month by month but in proportions that were not noticeable to anyone not thoroughly familiar with the requirements. But the story does not end here; from this revelation developed a system of material and supplies control which effectually stopped loss, leakage, or overconsumption of material.

A short while ago I was asked by the superintendent of a large school system whether I thought that the work and time involved in developing cost figures on such a detailed scale, was really justified by results. The fact of the matter is that one never knows until the data *is* available, whether it has been worth the trouble or not; but this may be said with confidence, and from experience covering many years in this particular line of work, that never has it proved *fruitless*. Frequently, of course, the business of developing detailed unit costs is modified after the initial experiment has served its purpose and shown up the weak spots, but I have yet to find any school office that has willingly dropped cost-accounting after once putting it into practice.

Before closing, it may be well to indicate briefly the kind of factors that lend themselves to visualization by means of charts, graphs, and other methods of pictorial presentation; these are merely suggestive and are by no means a complete list of possible sources:

1. Ratio of number of pupils over 14 to number between 7 and 14.

2. Percentage of increase in number of pupils over 14 since the year .....

3. Decrease or increase in cost per pupil in last ..... years.

4. Cost per pupil in different departments by years.

5. Percentage of increase or decrease in cost per pupil by departments.

6. Cost of instruction necessary to do one "grade" of work in the several grammar school districts.

(Concluded on Page 162)

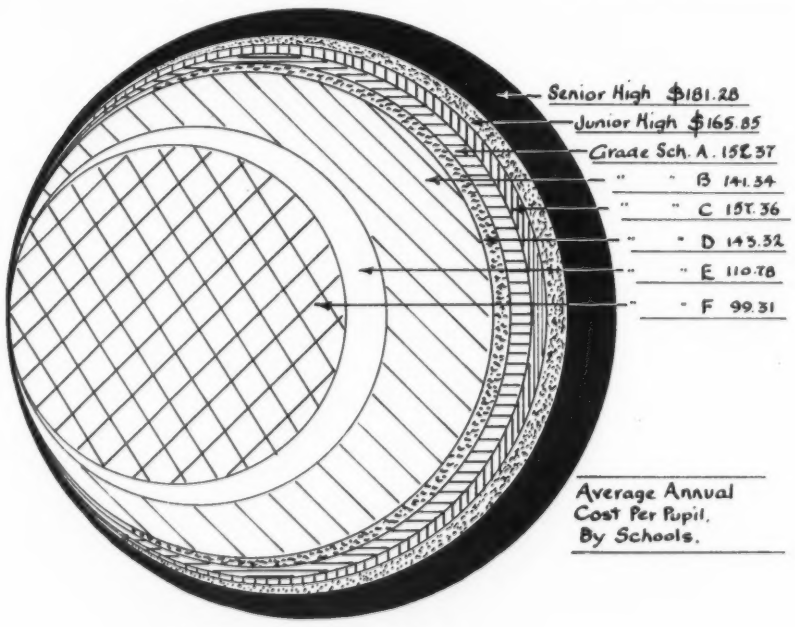

Senior High $181.28
Junior High $165.85
Grade Sch. A. 152.37
" " B 141.34
" " C 137.36
" " D 143.32
" " E 110.78
" " F 99.31
Average Annual Cost Per Pupil. By Schools.

CHART D.

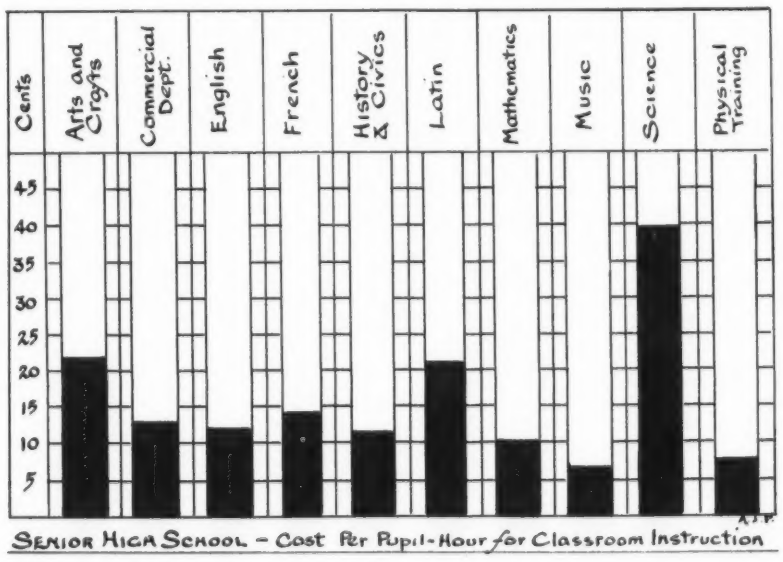


CHART E.

The Duties of the High School Clerk

H. Reid Hunter, Superintendent of High Schools, Atlanta, Ga.

A well-trained clerk who understands the problems of school management and who is able to carry out duties assigned, is of great value to a principal, the faculty, and the students of any high school. The clerk is comparatively a new addition to the high-school organization. In many instances the principal in the past was a mere "record-keeper." With the multiplication of various records to be kept in the school and numerous reports to be made to the superintendent's office, it has become necessary to develop a competent clerical staff.

There is a significant tendency to place on the principal a greater responsibility for supervision of instruction. The rapid increase of high-school population has brought this about: that we have increased teaching forces at a greater rate than we have increased the supervisory staff. In the larger cities the special supervisors or directors are using more time to furnish expert educational services and are doing less supervision of classroom instruction. This has made it necessary for the principal to assume the responsibility of carrying out the plans developed by the supervisors and other educational experts.

The development of more accurate instruments for measuring educational results, such as departmental objective tests, survey scales, standardized educational tests, have made it all the more necessary for the principal to give more of his time to the supervision of instruction. No principal is satisfied to see his school fall below the norms for the local system or for the country at large. These changes have forced the principal to transfer to clerks and others, much of the clerical work formerly attended to in person.

The problem of standardizing the duties of high-school clerks is one that received much attention in the Atlanta high schools during the year 1926. The junior and senior high-school population of 11,000 is cared for in four senior high schools, four junior high schools, and one junior-senior high school (colored).

Atlanta is definitely committed to the large high-school idea. Each school has from one to two clerks. In the spring of 1926 each high-school clerk was requested to make an accurate daily record of duties performed for a period of one week. This list was sent to the superintendent's office and an analysis of the reports was made. Many unusual items appeared in the list, such as assisting in the cafeteria, administering first aid, running errands for the principal, handling discipline cases of usual nature, writing personal letters, making business and social engagements for pupils and faculty. A conference was held, at which all principals and clerks were present, and an attempt was made to standardize the work of all the high-school clerks.

Interest in the local situation led to a study of this same problem in other cities. In order to find out what was the usual practice of handling the clerical work of the best high schools of the country, a checking list was prepared and sent to 35 principals of high schools. An effort was made to select schools distributed over a wide area. Twenty-six questionaries were returned. One principal failed to give his name or the name of his school so this one was disregarded. The following high schools replied to the questionary:

Girls' High School, Atlanta, Ga.
Englewood High School, Chicago, Ill.
Lane Technical School, Chicago, Ill.
Morton High School, Cicero, Ill.
Bloom Junior High School, Cincinnati, Ohio.
East Technical High School, Cleveland, Ohio.
Shaw High School, East Cleveland, Ohio.
North Dallas High School, Dallas, Texas.
Northwestern High School, Detroit, Mich.
Central Union High School, El Centro, Calif.
Central High School, Evansville, Ind.
Ball High School, Galveston, Texas.
Teachers College High School, Greeley, Colo.
Shortridge High School, Indianapolis, Md.
Louisville Male High School, Louisville, Ky.
Union High School, Mesa, Ariz.
Washington High School, Milwaukee, Wis.
University High School, Minneapolis, Minn.
Newport-News High School, Newport-News, Va.
Newton High School, Newtonville, Mass.
Girls' High School, Philadelphia, Pa.
South Phil. Girls' High School, Philadelphia, Pa.
Washington High School, Portland, Oregon.
Roosevelt High School, Seattle, Washington.
J. M. Congham High School, Wilkes-Barre, Pa.
R. J. Reynolds High School, Winston-Salem, N. C.

The information contained in the questionary was tabulated and is given below. An explanation of the tabulation should be made at this point. A few blank spaces were left after each general division of the questionary, and the principals were requested to fill in any additional duties performed, which were not included in the checking list. The last item was "Miscellaneous." Under this head many principals listed many duties, some of which appeared in the checking list but were not clearly understood. The author has redistributed, under the appropriate headings, many of the duties listed under miscellaneous. These items are starred, and have a low score but in all probability, if they had been set up in the checking list sent out, the scores would have been much larger.

Conclusions

1. That the checking list sent out contained most of the duties now performed by high-school clerks.

2. That parent-teacher associations either are not so strong in high schools or they do not depend on the school for clerical help.

3. That there is a general agreement as to what should be on file in the principal's office.

4. That there are many clerical duties reported which are now being performed by the assistant principal, and by high-priced teachers, which could be performed by clerks at a much lower salary.

5. That in many schools, the commercial department is rendering much clerical assistance.

6. That the list will furnish a fair checking list for a high-school principal who wishes to standardize his clerical work.

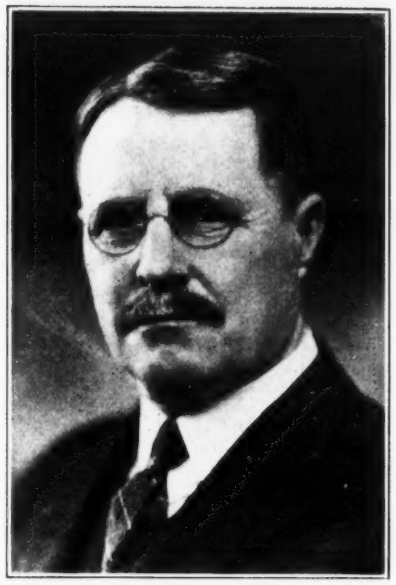
7. That more than one clerk is needed in a large high school if fifty per cent of the duties listed are performed by a clerk.

8. That there is a wide range of duties performed.

DUTIES PERFORMED BY HIGH-SCHOOL CLERKS IN 26 REPRESENTATIVE HIGH SCHOOLS

		No. times duties appear in list
I.	**Duties to Principal, and Assistant Principal:**	
1.	To assist in keeping the office neat and attractive	26
2.	Telephone Western Union, or some other agency, for the correct time	12
3.	Operate gong, bell or signal system (if not automatic)	9
4.	Take dictation from principal or assistant principal	25
5.	Transcribe dictation from notes or dictaphone record	23
6.	Post on bulletin board notices for teachers.	24
7.	Keep record of attendance of regular teachers	22
8.	Call in supply teachers when regular teachers are absent	17
9.	Prepare the payroll—and distribute monthly checks to teachers	23
10.	To keep on file the following:	
	A. Permanent record cards	9
	B. Bulletins from superintendent's office	26
	C. Schedule cards (2 sets)	21
	D. Carbon copies of important outgoing correspondence	23
	E. Important incoming letters	26
	F. Record of attendance of regular teachers and supply	22
	G. Courses of study, program of studies, etc.	24
	H. List of supply or supernumerary teachers	23
	I. School directory	19
	J. City telephone directory	25
	*K. College catalogues	21
	*L. Honor rolls and special school awards.	1
	*M. Looseleaf scrapbook of all printed forms used	2
	*N. List of drop-outs and reasons for withdrawal	2
	*O. Bulletin book containing all bulletins, notices, circulars, sent out during the year	1
11.	To keep the school well stocked with printed forms or record blanks	1
*12.	Keep principal informed of meetings	22
*13.	Record fire drills	3
*14.	Collect information from teachers concerning individual pupils	3
*15.	Make out bulletins or notice to be sent to teachers or pupils	2
16.	Call parents for appointments with principal for consultation purposes	3
17.	Keep calendar of school events	2
II.	**Duties to Teachers:**	
1.	Distribute supplies	21
2.	Deliver messages telephoned in to teachers	25
3.	Place mail or notices in teachers' mail boxes	24
4.	Receive pages	25
5.	Cut stencils for tests or examinations and run off copies on mimeograph machine	16
*6.	Check weekly reports	3
*7.	Mark standardized educational test papers	3
*8.	Cut stencils for "contracts" (Lesson Plans).	2
*9.	Locate pupils missing from class	2
III.	**Duties to Pupils:**	
1.	Receive lost articles	13
2.	Restore lost articles to owner	11
3.	Notify parents of illness of pupils	19
4.	Compile daily list of pupils absent from school or classes	20
5.	Prepare statement of pupils' credits when they withdraw from school	26
6.	Furnish routine information	24
7.	Make out tardy slips, and absence slips	17
8.	Record truancy information	2
9.	Keep record of free textbooks and requisition books out to teachers	3
10.	Collect fines for damaged property or collect for lost property	1
11.	Collect nonresident tuition	4
12.	Change pupil's programs	2
13.	Check up credits of seniors, earned and to be earned	4
14.	Send for credits for students entering from out-of-town schools	1
15.	Issue withdrawal or transfer tickets to other schools in the local system	1
16.	Prepare honor rolls	2
17.	Prepare eligibility lists for athletic events	2
IV.	**Duties to Parents:**	
1.	Notify parents of absences	13
	A. By use of telephone	10
	B. By use of letters	7
	C. By use of postal cards	1
2.	Mail out deficiency notices	15
3.	Deliver messages from parents to pupils	21
4.	Deliver messages to parents of serious accidents or illness of children	22
5.	Deliver to pupils delayed lunches delivered to school by parents	19
V.	**Duties to Parent-Teacher Associations:**	
1.	Cut stencils and run off mimeograph notices of P. T. A. meetings	8
2.	Assist the principal in keeping the P. T. A. officers in touch with important school events, clinic days, athletic contests, carnivals, graduation exercises, etc.	6
3.	Keep a file of all P. T. A. bulletins, publicity, etc.	11
4.	Distribute notices of meetings to parents by pupils	1
VI.	**Duties to General Public:**	
1.	Answer telephone calls and give information	25
2.	Receive visitors and give them information requested	23
3.	Receive visitors and tactfully discover their business, and if it is necessary for them to see the principal, find him for the visitor.	25
4.	Guard the teachers and pupils from an exploitation by salesmen or advertising agents	21
*5.	Fill out questionaries for U. S. Government and accrediting associations	
VII.	**Duties to the Superintendent's Office:**	
1.	Answer telephone calls and get principal on line immediately if so requested	26
2.	Prepare and send to superintendent's office such regular and special reports as may be required	24
3.	Keep principal informed of special meetings called by the superintendent	18
4.	Cooperate with business department in efficient operation of mail or delivery service.	16
5.	Promptly notify the superintendent's office of any emergency	14
6.	Prepare annual requisitions for school supplies for the following year	11

(Concluded on Page 154)



E. B. SKINNER,
President Board of Education,
Madison, Wis.

Prof. E. B. Skinner is a Wisconsin educator who fills an instructorship at the University of Wisconsin and at the same time serves as the president of the Madison board of education. Prof. Skinner is deeply concerned in the subject of school administration and his voice is frequently heard in educational gatherings. He writes and speaks tersely on the practical phases of school government and commands the attention of school administrators throughout the state. The schools of Madison are his special concern.

Investments with Large Dividends

Theo. B. Shank, Instructor, School of Education, St. Louis University

Kansas City, Missouri, has a school board with a vision and with an imagination and with good ideas of investments which pay large dividends. Its recent action to give teachers of five years' service a year's leave of absence for further study, with a bonus of $200 a year for a period of five years after their return to the city, will have a greater influence upon their schools than they suspect. In addition, the teachers do not lose out on their regular salary schedule increase. In other words, the Kansas City school board thinks, and wisely, that it is worth a thousand dollars to the city school system to have one of the teachers study for a year. How soon will other school boards awaken to this truth? It was a fine move and a compliment to the business sagacity of the Kansas City board.

Can you imagine a board which not only gives no bonus for further study, but which also penalizes its teachers in the matter of salary increase for the year absent in study? Can you imagine a board which will deduct from an all year employee, for the time which he is teaching in a famous summer school? When will school boards awaken to the fact that this sort of thing is a poor business policy? How many members would adopt such measures in running their own business? Do the citizens elect men who have been successful in their own business with this sort of business policy for the schools in mind?

May I give a bit of experience while a superintendent, which is illuminating? I was invited to the superintendency of a school system where a rule was in force which gave the teachers sick leave with full pay for a period of ten days for the year. The first request which I made of the board was to rescind this action. They were amazed and said that my predecessor had worked hard for this policy for many years and that they felt that it was a good thing. Upon being asked what I wished in place of this regulation, I told them that I wanted them to pay the salary of each teacher during the time of her illness, whether a day or six months. The usual treasury watch-dog raised his hands in righteous indignation and said that it would bankrupt the district. I told him that I would go on record as willing that they might deduct from my salary any excess paid for this purpose over the amount paid in previous years. Then the request was granted. But when I told the teachers at our first meeting that their sick leave for ten days had been cancelled at my request, they gave me black looks. When I told them quickly that in the future, we would pay them as long as they were ill, they smiled, but with a look of incredulity. I asked them, however, not to remain out of a school a minute unless they could do so with a clear conscience.

One of the teachers had picked up typhoid somewhere during her vacation and almost as soon as school opened, she became desperately ill and was out of school for ten weeks. Her salary check was sent to her regularly; the other teachers soon learned of this and at the close of the year, the substitute bill was just half of the previous year. What did this mean? Not that the teachers were really dishonest in former years, but it meant that they felt that the board was human and that they were their friends. Such loyalty, such teaching, such cooperation had never been known in this school system.

Why do banks never deduct for illness? Why do they send their men away for weeks at a time with expenses and full salary, to see what other banks are doing? Why do large corporations treat their men so liberally in every particular? The reason is so obvious. It is worth more in morale than the few dollars spent. When will school boards learn this important lesson?

Letters of a Superintendent[1]

To the Principals:

In some of the classrooms a visit by the superintendent is the occasion for interruption of the work of the class. In some rooms the pupils rise when the superintendent enters. In others they say "Good morning, Mr. ———," or "Good afternoon, Mr. ———." Personally, I must confess, I like this, but from a professional point of view it is bad practice. I think it would be well to request the teachers to instruct the pupils not to address me until I speak to them. Have the teachers explain the reason.

There are many teachers who ask the superintendent when he comes in whether there is anything special he would like to see in schoolwork. The regular work should proceed as usual when the principal or superintendent visits the classroom. I think the teacher should recognize the principal and superintendent briefly when they enter a classroom. Classwork should proceed as usual, unless the principal or superintendent asks for a change of procedure. It sometimes happens that a teacher will discontinue one form of class activity such as arithmetic, and take up another such as oral reading, as a demonstration of the ability of the pupils in oral reading. This sort of thing is liable to lead to the suspicion that the arithmetic work is not being well done.

I believe that the idea that the class must not be interrupted, or the teacher diverted, from her usual classroom procedure by visitors is accorded more importance than it deserves in the theoretical discussion of classroom procedure. Several professional books in the chapters on classroom visits state that the official visitor (superintendent, supervisor, or principal) should enter by the rear door if there is one, and should remain in the background and take notes on what is going on, and that he shouldn't say "Good morning, boys and girls." Most teachers of administration and supervision agree that the supervising visitor should not walk about the room, that he should not inspect the written work of individual pupils, and that he should sit down.

I do not agree with any of these theories. The front door of a schoolroom is the place to enter. To "enter quietly from the rear" is too much like pussyfooting. To sit down and take notes will surely attract the attention of the pupils and distract the teacher. To "sit quietly in a rear seat" arouses the curiosity of the pupils and results in a stealthy craning of necks to see what the visitor is doing. To "sit quietly near the teacher's desk" makes the supervising visitor too conspicuous and places the teacher at a disadvantage. To "refrain from walking about the room" and inspecting the written work of individual pupils serves no good purpose, and to "avoid the habit of greeting the class, or of speaking to individual pupils," is downright harmful, because it sets up a barrier between the pupils and the superintendent, principal, or supervisor.

Many of the accepted principles of supervision are artificial, far-fetched, and foolish in my opinion. (I was going to say humble opinion, but I won't because although my opinion in this matter may be wrong, I feel so strongly about it that the adjective "humble" doesn't apply.)

What is the purpose of supervisory visits? The books and the lecturers list several purposes, such as: (1) teacher rating in skill in presenting a subject, in classroom management, in lesson assignment, in questioning, in economical use of time, and in enunciation; (2) evaluation of subject matter in regard to such things as—Is it worth while? Is it adapted to the needs and abilities of the pupils?

Such variety and complexity of purposes of supervisory visits are listed that, if the visitor writes down his purpose, as certain leaders of educational thought would have him do, he is bewildered himself and he adds to the confused bewilderment of teacher and pupils as to what it is all about.

Supervisory visits have one purpose only, and that is the improvement of the school product. All other purposes are subsidiary and are mere subdivisions about which there need be no concern, so long as the main purpose is kept in mind and intelligent consideration is given to the methods of attaining that purpose.

Certainly one of the methods of attaining this purpose is by establishing cordial relation with the pupils and teachers. This can never be accomplished by an attitude of dignified aloofness toward the former, and professional superiority toward the latter. Neither can it be brought about by creating an atmosphere of formality and repression. If the supervisory visit is long enough, or presents an opportunity for greeting the class without an abrupt interruption, then he should speak to the class.

Simplicity of purpose, rather than multiplicity of aims, will go far toward clearing away the smoke screen of pedagogical maneuvers of supervisors which too often keeps teachers and pupils in the dark. I would rather have pupils and teacher think I came in just to say "Good morning," than to have them wonder why I didn't stay away.

Very truly yours,
Superintendent of Schools.

[1]NOTE—The accompanying letter is the first of a series of twelve to appear in the JOURNAL. The letters, which have been selected from actual letters of a New England superintendent to his principals and teachers, will take up typical problems in school administration and suggest practical remedies for common difficulties.
—Editor.

ANSWERING CHARGES OF PRODIGALITY

Mr. C. E. Ackley, superintendent of city schools at Ashland, Ky., sends us the following clipping taken from the Ashland *Daily Independent* of October 10, 1923, in which Mr. Charles Russell, a member of the local board of education, answered insidious rumors of prodigal spending on the part of the school board:

"Gentlemen, I am the oldest member of this board, I believe, having served for about eighteen years. Personally, such criticism does not affect me—for I know that such thoughtless criticism is often the portion of those who serve the public best. But to you and to anyone who may have confidence in me I want to say that I have given the schools the best I have. Whatever business or financial ability I have has been devoted conscientiously to their welfare. I believe that what we have done is the best that could have been done. I don't believe we could have operated the schools on a cheaper scale, or that economy could have been practiced any farther—and had good schools. I am sincere when I say that I have no regrets or apologies for the conduct of this board, and I feel deeply in this —for I believe that to lessen the effectiveness of the schools is not only a civic sin, but a sin against the five thousand children of this city which God will not forgive."

—To assist freshmen high-school students in their adjustment to new conditions, and thus to reduce mortality in the freshman year, weekly lectures on pertinent topics will be given by the city superintendent of schools to freshmen students in the high school of Walla Walla, Wash.

An Improvement in School Survey Maps

T. V. Goodrich, Director Department of Measurement and Research, and M. C. Lefler, Superintendent of Schools, Lincoln, Neb.

The improvement referred to consists in the use of a square, so drawn that its diagonals are parallel to the street lines, instead of the usual circle, to designate the boundaries of an area to be served by a school at the center. The sides of the square are oblique lines forming 45-degree angles with the streets.

The Oblique-Line Boundary and Its Advantages

For convenience the method described is referred to as the oblique-line method. In cities having a rectangular system of streets the oblique-line method has the following advantages over the circle method:

1. All points on the oblique-line boundary are equidistant from the center of the area to be served, in the sense that children living along this boundary walk the same distance to get to school. The square formed by these oblique lines, therefore, accurately describes the entire area within the maximum walking distance. Points in the circumference of the circle

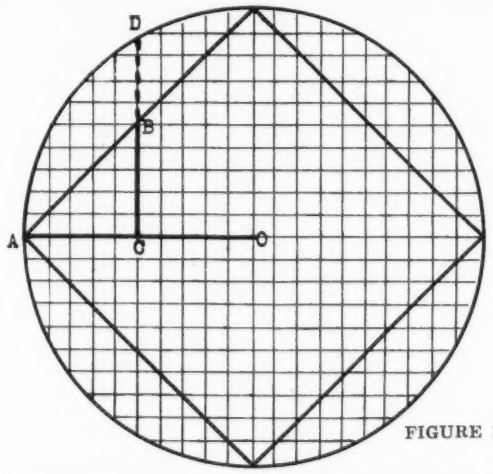


FIGURE 1.

COMPARISON OF CIRCLE AND SQUARE WHERE THE RADIUS OF CIRCLE REPRESENTS THE MAXIMUM WALKING DISTANCE.

If the maximum walking distance is the distance from a school at O to A, it is the square and not the circle that accurately describes the area within this maximum distance. For example, BC plus CO equals AO. The walking distance to all points outside the square but within the circle is greater than the maximum. If each small square represents one block, the walking distance from O to D is four blocks greater than from O to A.

are equidistant only in geometrical sense, and the circle, therefore, does not accurately describe an area of any administrative significance.

2. The oblique-line method shows the overlapping of different units in a far more accurate way than the circle method. This is of importance, since economical administration requires that from time to time children be transferred from one school to another. The overlapping of the squares shows accurately the area within which transfers may be made, without requiring any child to walk more than the maximum distance determined. Circle boundaries do not show overlapping in its relation to transfers, or shifting of boundaries.

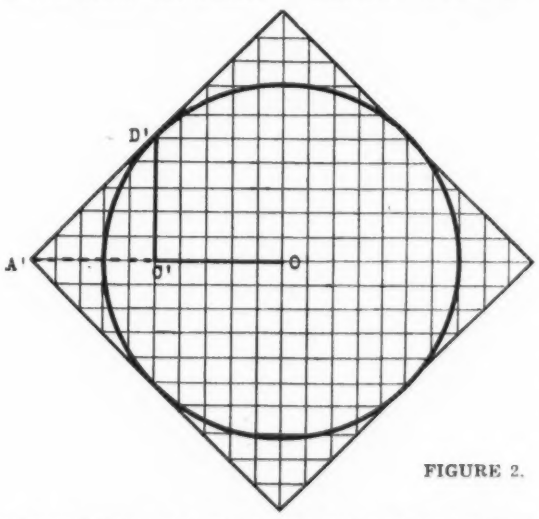


FIGURE 2.

COMPARISON OF CIRCLE AND SQUARE WHEN THE MAXIMUM WALKING DISTANCE IS TO A POINT ON THE CIRCLE NOT REACHED BY STREETS THAT INTERSECT AT THE CENTER.

This illustration is similar to Figure 1 except that the walking distance from O' to D' is assumed to be the maximum. The circle in this instance does not include the entire area within the maximum walking distance. All points outside the circle but within the square are within the maximum walking distance. The point A' which is within the maximum walking distance is three blocks from the circumference of the circle.

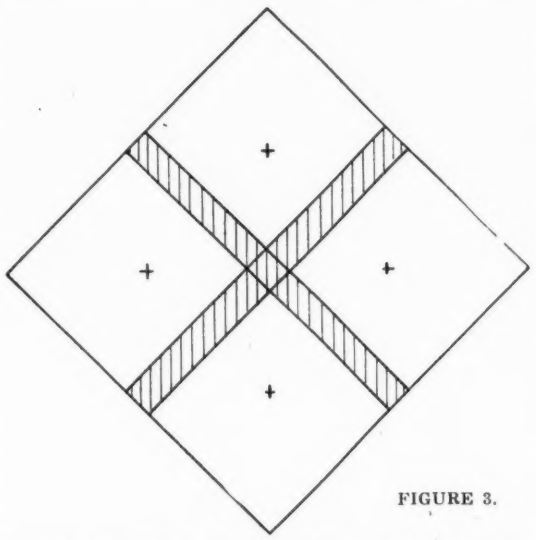


FIGURE 3.

SQUARES DRAWN TO ILLUSTRATE THE PROBLEM OF OVERLAPPING.

The maximum walking distance is the travel distance from any center (+) to its corresponding oblique line boundary. The overlapping of the squares represents territory within the maximum walking distance of more than one center.

3. The oblique lines represent more nearly than the circle the district boundary lines as they will actually be drawn in the light of a survey.

Illustrations of the Superiority of the Oblique-Line Method

Figures 1, 2, 3, and 4 illustrate the superiority of the oblique-line method in a generalized situation. In Figs. 1 and 2, the light horizontal and vertical lines represent streets or lines of travel pupils must follow in going to and from school.

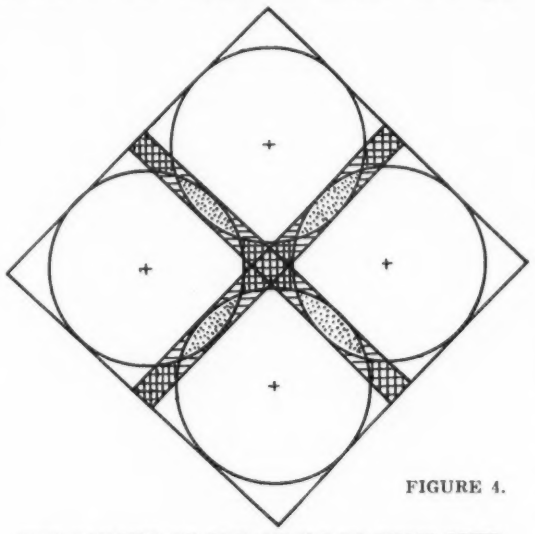


FIGURE 4.

THE FAILURE OF THE CIRCLE TO SHOW OVERLAPPING ACCURATELY.

The large areas is the same as in Figure 3 and the centers at the same relative points. The circles are so drawn that the maximum walking distance to the circumference is the same as the oblique line boundary. Three conditions with reference to overlapping are shown:

1. Area within maximum walking distance of more than one school and included in both circles, is indicated by dots.
2. Area within maximum walking distance of more than one school and included in only one circle, is indicated by single diagonal lines.
3. Area within maximum walking distance of more than one school and not included in any circle, is indicated by cross hatching.

If in Fig. 1 the maximum distance a pupil is required to travel is the distance from O at the center, to the point A on the circumference of the circle, the maximum area that can be served is described not by the circle but by the square, for travel distances to any point where an oblique line intersects a street line is equal to OA, the maximum. For example, BC plus CO equals AO. The circle describes an area a considerable part of which lies beyond the maximum travel distance. The travel distance to D, for example, exceeds the maximum by the length of the line DB. Its ratio to AO, the maximum, is roughly, 14 to 10. If the maximum distance is the travel distance from O' in Fig. 2 to D' which is also on the circumference of the circle, it is again the square and not the circle which describes the maximum area that can be served. In this case a considerable area outside of the circle is within this maximum walking distance.

Figs. 3 and 4 show areas divided into smaller units by each method. The maximum travel distance in any unit in Fig. 3 is the distance from the center (+) to the oblique-line boundary. The shaded area formed by the overlapping of the squares comprises all territory within the maximum walking distance of more than one school. It is within this territory that transfers must be made. Since this condition holds for the entire overlapping area and nowhere else, the method represents accurately a situation of administrative significance. The maximum travel distance in Fig. 4 is the same as in Fig. 3, the circles being drawn through points at this maximum distance. The overlapping of the circles does not include all territory within the maximum walking distance of more than one school. A part of this territory is in two circles, a part in only one circle, and part not in any circle. It is impossible by the circle method to give an accurate picture of the territory within which transfers may be made.

Use of the Oblique-Line Method in a School Survey

The use of the oblique-line boundary in an actual school survey made in Lincoln, Nebraska, in 1924 is illustrated in Figs. 5, 6, and 7. In this survey ten blocks was agreed upon as the maximum distance which elementary school pupils could be expected to walk. This is approximately the same as the maximum walking distance in a circular area having a radius of seven blocks.

Reduction in the number of buildings was the first problem to receive attention. Fig. 5, with the oblique lines drawn to show territory within ten blocks walking distance of each school or school site, shows the conditions which existed at the time of the survey. It shows certain areas within ten blocks of four schools, other areas within ten blocks of three schools, etc. Reference to the legend under Fig. 5 makes it clear that the reduction of this overlapping was accomplished by the abandonment or relocation of buildings designated by the small circles. The territory within ten blocks of four of these buildings G, H, L, and P is entirely within the overlapping area, that is, all pupils attending these schools lived within ten blocks of some other school. It was agreed that it was desirable to abandon G, H, and P. Fig. 6 shows the overlapping that still exists after these three buildings are abandoned.

The question of relocating the four remaining unsatisfactory buildings in the class designated by the circle was next given attention. A new site for T was purchased to bring the building closer to N. The territory between T and N shown in Fig. 1 as more than ten blocks from either school is thus eliminated. An attempt was made to find a location for C a few blocks nearer to D but this attempt was not successful. No way was found to improve the location of L and J. New buildings at these points were, therefore, made a part of the building program. The sites at N and S were found to be well located and new buildings were scheduled for these locations.

In reaching a decision as to how overlapping areas between schools should be divided there were four determining factors. (1) Boundaries

(Concluded on Page 148)

THE AMERICAN
School Board Journal

WM. GEO. BRUCE
WM. C. BRUCE } EDITORS

EDITORIAL

THE SCHOOL LEGISLATION FOR 1927

The indications are that the grist of school bills, that have gone or will go to the several state legislatures now in session, is unusually large. The discussions which have been engaged in by educational associations and various school administrative bodies during recent months also give a cue as to the character of the legislative changes that are likely to be urged.

These deal in the main with the adjustment of units of school government and with the question of financial support. The two are quite interwoven in that the larger unit of administration, as against the smaller, not only contemplates greater educational efficiency, but also better financial support. It is here held, while under the district system each unit cares for itself, that under the county system all districts are cared for alike. The larger unit promises more uniform support.

The proposed change has in the past encountered most strenuous opposition. The school trustee of the small rural district is not inclined to surrender his prerogatives. He holds that the control of the schools should be kept near the people that pay for them, and is unwilling to yield to the county unit system.

The argument which contends that the schools should be kept near the people and that every district, no matter how small, shall have a voice in the management of its own school, is not easily refuted. It is democratic in theory and in practice, and hence intensely American.

And yet there is another side which is equally democratic and equally American. If we proceed upon the thought that every child whether it lives in a small or large district, rich or poor district, should have an equal chance with every other child, we strike the very essence of democracy and Americanism.

How can this ideal be best achieved? Through the district system or the county system? What is there about the smaller unit that is not accomplished by the larger? Or, can the smaller unit do all that the larger can do? Finally, is it not a fact that when the two units are weighed and measured, as to relative advantages and disadvantages, the verdict will be in favor of the larger unit? Does it not ensure greater administrative efficiency, a better distribution of school support, and a better opportunity for the school child?

These questions will enter into the legislative debates and it will be up to the educators who champion the county-unit system to find the several answers. As already stated, the change from the one to the other, no matter how laudable and desirable, will not be easily effected.

Other changes in the school laws of the several states are urged. Where the state superintendent is elected by popular vote, it is proposed to change to the appointive system. In several states it is believed that the office of state superintendent of public instruction can be taken out of the realm of practical politics only by leaving the selection to a state board of education.

The question of an equitable distribution of state school support will once more engage the attention of educators and legislators. The subject which has had the careful study of those versed in public finance is by no means settled. The problem of the rich and the poor district is still before us.

Finally, we come to the matter of taxation. There was a time when the schoolmaster would make his appeals to the legislature for more liberal financial support for the schools without bothering his mind as to the sources of a tax revenue. Now the educator, realizing that a tax revenue is a prerequisite to school support, discusses equity and uniformity in taxation, and stands ready to advise the legislator on shortcomings of the modern taxing instruments.

It would be premature to predict at this time just what part of the proposed legislation will be enacted into law, but it is safe to hold that progress will be made.

THE SPENDTHRIFT CHARGE AGAINST THE PUBLIC SCHOOLS

With the constantly increasing cost of popular education, it naturally follows that among those who hold to economy and conservatism some one should utter a word of caution. It is also to be expected that the cry of extravagance should be raised. Just as men differ as to the measure of service that the schools should render, so they may differ, too, as to the amount of money that should be expended upon them.

But, there are also those who do not approach the subject with either a mere caution or a well-digested criticism, but with all the vehemence and thunder of an alarm. A school board somewhere has built a schoolhouse that cost more money than a similar schoolhouse in a neighboring town, and the cry of extravagance is heard. Therefore, all school systems must be wrong.

In a recent editorial, the *National Municipal Review* asks the following questions: "Are we spending too much money for education? Has our zeal for the welfare of the child blinded us to the need for the same practice of efficiency and economy in school matters such as we are more and more coming to demand in city government? What is it offering the young people? Is it adapted to their needs? Is it running wild financially?"

So far as these questions simply imply caution and watchful care they are timely. So far as they are intended to sound an alarm that things are wrong all along the line they are unwarranted. A report made by the Boston Finance Commission on schoolhouse construction in that city says this: "No unit costs have been established and no studies of economical types of buildings have been made. Architects, left to their own devices, have produced expensive schools, unfitted for the service they are to render. The methods of arranging for construction are found to be haphazard and piecemeal, and the school committee has labored without attention to the future growth of school population, with resulting misfit buildings."

But, even a statement like this does not warrant the supposition that many school systems are equally negligent or extravagant, nor does it deserve the implication which the editor of the National Municipal Review advances when he says: "To some, indeed, it may seem almost iniquitous to question the operation of our public-school system. On occasion, taxpayers have been told, almost in so many words, that their highest function is to vote supplies as professional educators dictate. Members of school boards will sometimes frankly admit that our schools are run extravagantly and wastefully, but none seem brave enough to protest publicly against further and greater expenditures."

The taxpayer is usually frank enough to voice his sentiments, either individually or collectively, on proposed schoolhouse projects. He has his say when it comes to vote a schoolhouse bond issue. The school board member does not consent to a new schoolhouse project unless it is needed and when it comes to formulation of plans and the consideration of bids he is not cowardly submitting to the recommendations of the educational factors.

To hold that "none of them (school-board members) seem brave enough to protest against further and greater expenditures," is pure bunk. The struggle to secure adequate schoolhousing even where it is most needed is frequently a strenuous task. The men and women who serve as members of the board of education are as courageous and high-minded as those who serve in other deliberative bodies. And if the American schools are highly efficient—and they unquestionably are—it is because the administrative bodies behind them secure a dollar's worth of service for every dollar expended both in service and in equipment.

CITY COUNCIL DOMINATES OVER BOARDS OF EDUCATION

The members of the Chicago board of education are named by the mayor subject to confirmation by the city council. Recently four new members were named by Mayor Dever and an aldermanic committee at once proceeded to call the several appointees upon the carpet and catechize them as to their attitude on a variety of school questions.

"The replies were noncommittal," said the Chicago *Tribune*, "and we do not see how they could have been otherwise. The questions upon which the candidates were asked to deliver their considered opinions concern technical matters of school administration upon which no man would care to commit himself irrevocably in advance. Junior high schools, for example, were instituted because pedagogical experts recommended them for the good of children in the seventh and eighth grades.

"The proceedings of the committee will strike most citizens as absurd. All four of the nominees are well known. They have been in the public eye for years. Their records of public service are open books, but they are being subjected to cross-examination as if they were charged with disorderly conduct in a police court. Their motives are being impugned. It is this way that Chicago aims to induce men of character and attainment to serve the public without salary."

The idea of a body of aldermen attempting to determine the fitness or unfitness of citizens to serve as members of a board of education may have some merit, particularly so when the appointing power resorts to political connivance and subterfuge. When the nominee, however, possesses all the qualifications ordinarily contemplated for school-board honors, namely, character and fitness, it becomes illogical to base final approval upon immediate or remote school problems.

The spectacle of a body of aldermen sitting in judgment over the character and fitness of high-class citizens chosen to serve on a board of education may not only seem absurd to the good people of Chicago, but also to the thoughtful people elsewhere. We know of no instance in recent years where a city council has arrogated to itself the task of saying who shall or who shall not serve on a board of education.

The appointive method of creating a board of education by placing the nomination in

hands of the mayor and the confirmation in hands of city council has worked reasonably well in large centers of population. The Chicago approach to this method, however, is extremely faulty in that it seeks to determine the school-board personnel in accordance with aldermanic conceptions of school administrative policies, rather than to base the choice upon the worthiness and ability of the aspirants for school-board honors.

WHAT HAPPENED TO SUPERINTENDENT ENGLEMAN AT TERRE HAUTE

Without presenting specific reasons for its peremptory action the board of education of Terre Haute, Indiana, by a vote of four to three, ousted Dr. J. O. Engleman from the school superintendency of that city and at the same session by the same vote elected his successor.

Owing to his prominence as an educational leader, which is more than local or state-wide, and his popularity with the business and professional people of Terre Haute the enforced retirement of Dr. Engleman attracts more than ordinary attention. The student of school administration will be concerned in the causes that led to the unusual procedure. One begins to wonder how it is possible that in the twentieth century an American city will remove from office an educational leader, a man of unquestioned character and ability, without advancing any substantial reasons for doing so. The first inference would be that the question of morality was behind the action. But, that was not the case. As already stated his high character was conceded.

The cause was founded in a deep-seated difference of viewpoints as to who was to run the schools. It is one thing to agree in printed rules that the superintendent shall run the schools, but quite another thing to actually permit him to do so. If he possesses force of character and a strong professional spirit, he will insist upon his prerogatives.

If, on the other hand, a board of education that subscribes to the modern school administrative procedure, which recognizes the superintendent as the chief executive, and then seeks to override his authority is bound to raise a conflict. It is quite logical to clothe such chief executive with ample authority and then hold him responsible for results. But, to undermine this authority and still hold him responsible for results is quite illogical.

It is not so much a question here as to whether the school board or the superintendent shall run the schools, as it is the proper coordination of the two factors whereby the former delegates the performance of certain duties to the latter.

The course of events which culminated in Engleman's removal, and as noted from the Terre Haute newspapers, reveal a sharp difference of opinion as to who should run the schools, the superintendent or the school board. The superintendent, in this instance, being a man of exceptional force and ability succeeded in inducing the board to accept the modern conception of school administrative procedure.

This meant that the school board entrusted the superintendent with the management of the schools and held him accountable for results. It remained to be proven, however, whether the school board, the local press, and the general public were sufficiently prepared not only to accept, but also to adhere to an advanced policy in the administration of the school system.

The commercial and civic bodies of the community, consisting mainly of the business and professional elements, applauded the new order of things and recognized the educational leadership of the superintendent. That leadership, however, was too advanced for the majority members of the board. The superintendent who not only stands for the best in educational method and in administrative policies, but frowns upon the things that seem irregular and contrary to the best interests of the school system, makes himself obnoxious to a body that seeks to usurp all the functions.

The school board soon demonstrated that it was afflicted with a provincialism which rendered that body unprepared to accept modern conceptions of school administrative practice. Its rows and eruptions became more aggravating from month to month. Then the social disease which has afflicted many small towns of our country and which feeds upon religious prejudice and intolerance, and thrives best in the shadows of secrecy, became a factor in the drama. Here the die was cast. Engleman had to go.

The educational leader who stands boldly for correct ideals, and who adheres to accepted precepts in school administrative procedure, cannot live long in an atmosphere of narrowness and prejudice. His prestige and scholarship cannot save him. He is bound to go under.

Happily, the situation dealt with here is exceptional rather than general. Ignorance and prejudice have existed in all ages and will continue to exist, but they have seldom been permitted to wreak their evil influences in the American field of popular education. Nevertheless, it is regrettable that the evil should ever even in the slightest degree, enter the domain of school-administrative service.

In the present case, Dr. J. O. Engleman is the victim. His professional career, however, is not terminated. His services will be sought elsewhere. The real loser in this unholy transaction is Terre Haute. It has lost the services of a high-class educator, but it has lost something much more precious, namely, the respect and confidence of a truthful and fairminded public.

THE NEMESIS OF SCHOOL ADMINISTRATORS

Those who sit on the bleachers overlooking the American school administrative arena may occasionally witness some interesting interference with the play. The principal actors may be deeply engrossed in the game that is being played, but somebody steps into the arena with a protest that is designed to embarrass or chastise somebody else, and delay the orderly procedure of the game.

Thus, in one town it is an obstreperous editor, in another it is a misguided school board member, in a third an unruly taxpayer who runs amuck on the school plant and rights the great wrong that is being inflicted. In Denver, Colorado, an editor sits awake nights to hatch out things that will make the superintendent and school board look selfish and brutal in the eyes of the general public. In Dayton, Ohio, another editor is busily at work in tearing down the prestige of the school superintendent. In each instance, the superintendent is made to appear as an arrant rogue who ought to be hung without trial. Each of these cities is blessed with an excellent educational leader.

It so happens frequently that when one editor sees something good in the administration of the local schools, the other feels himself called upon to go on the other side of the question. Journalistic rivalry does not permit men to be of one mind even if the facts would warrant such agreement.

Then there are numberless instances where the uninformed, or misinformed citizen who occupies a seat in school board deliberation "starts something." He is flattered by the publicity he gains, and the affirmative comments of his immediate followers. The conservative element on the board is not likely to rush into print unless driven into it. The superintendent, as a rule, maintains a diplomatic silence.

The ill considered outbursts and attacks against those who are in the main responsible for the efficient administration of a school system may direct attention to something that needs correction, but as a rule those who raise them merely interfere and embarrass the orderly process of things, and tend to shake the disciplinary frame work of the entire system.

It is by no means argued here that everything said and done by school managers is sound or regular. But, there is not a situation in the entire range of school administrative service that could not be solved in the calm of mutual confidence and amity. Harsh outbursts and denunciation, whether flaunted through the columns of a newspaper or shouted in open board meetings, seldom lead to desired results.

Those who assume their task with a strict adherence to duty, regardless of personal prerogatives and interest, are bound sooner or later to encounter antagonism. Those who do laudable things and do them well are not immune against public attack. Sometime in the course of events a Nemesis is certain to land upon the administrative worker. She must be tolerated until she has spent her ammunition and has vanished into obscurity again.

SHALL THE SCHOOL BOARD CONTROL?

At Norwalk, Conn., the question has arisen whether the board of education or the board of estimates shall control the school finances. Formerly this control was in hands of the board of estimates. Now it is in hands of the board of education.

A measure presented to the legislature proposes to place the control of the board of estimates again. This body consists of six business men appointed for a six-year term by the mayor. Its function is to fix the budgets of all city departments. The bill, however, contains a clause whereby the choice is left to a referendum of the voters.

Arthur C. Wheeler, a former mayor, says: "The point is, the citizens of Norwalk must entrust their educational institutions to some one. Who shall it be? Is public education a primary requirement of our city? Do our citizens want to have this department conducted in an efficient and adequate manner, commensurate with the needs of the coming generation, or do they wish to risk their school system by placing its purse strings in the hands of a board not familiar with the educational problem or trained in its needs? Do they not want to select a board of education from the best material available for the conduct of this most important public department and then abide by its decisions, as to funds needed for the system and then make those funds available by taxation?

"If the board is not to be entrusted with the regulation of school expenditures, but must be subjected to an outside control by those not familiar with the educational needs of the city or trained in educational problems, then it will be increasingly difficult for the city to secure for the board of education the services of that class of citizens who ought to be in charge of our educational problems."

BEG YOUR PARDON!

In an editorial on taxation and school support which appeared in the February issue, a quotation on the property tax is credited to Dio Richardson, a member of the Taxation Committee of the Washington Education Association. This quotation should have been credited to Professor Edwin R. A. Seligman of Columbia University, as was done by Fletcher Harper Swift of California, who presents an excellent paper on the "Problem of State Sources of School Revenue" in the same issue. The editorial credits the quotation wrongly, hence this explanation.

CHATS DURING RECESS

Some one in California has figured out that the automobiles in that state will seat 5,200,000 persons while the schools only seat 1,200,000 pupils. The people of California spent last year for gasoline a sum estimated at $145,353,483, while they spent for all schools, including the state university, $130,737,912, or nearly $15,000,000 more for gasoline than for education.

It is probable that a like survey would reveal a similar condition in most of the other states. Without criticising people for enjoying their automobiles, it does seem that they should be willing to spend as much for the education of their children as they spend for gasoline.

The Good and Evil in the Parent-Teacher Association

Cora Miley

The parent-teacher organization has grown with astonishing rapidity in the last few years. The purpose of the body is a good one, and its effectiveness as a great educational factor quite possible. But, there is great possibility and likelihood of harm and hindrance from this same organization. It depends upon the ideas and ideals held by the leaders of what should, and what should not, constitute the activities of the organization.

For ten years I was actively engaged in the work of such a school club. We called our club the "patrons' club" and the teachers were active members. Except that we were not nationally organized, there was no marked difference between it and the clubs of today. During those years as member and leader I saw many things which could be undertaken with good results, and also many things which should not be done by these clubs.

Establishing an Ideal

All organizations of this kind should have a definite ideal and purpose which should be stated again and again in order to keep clear, in the minds of the members, the goal toward which they are working.

Our ideal encompassed three points. First, we wished to be of some material help to the schools. If they needed pictures, supplementary books, a new rug for the restroom, or things like that, we wanted to supply the needed articles. But, care was taken not to undertake too much. The club was not a money-making organization. To make some money gives a feeling of unity in the club, but undertaking too much burdens it and sets up friction, which must be avoided. The life and usefulness of a parent-teacher club depends on its harmony.

The second point was to cooperate with the schools. This meant visits to the classrooms with the idea of giving encouragement and approval to teachers and pupils, of learning about conditions in order to contradict idle gossip floating around about the schools, and of giving support to those in authority. Now certainly, all principals and teachers do not deserve approval and commendation, but even these would do better with cooperation than with censure. A wrong condition in the schools should never be discussed and agitated during the school term. There are those in authority, the school board, to whom it should be reported; there is a time, in the spring elections, to correct it. We found the point of cooperation a helpful one. It brought the mothers to the school, showed them the true existing conditions and made cooperation an established fact.

The third point in the patrons' club was that it should be a place to learn to be better mothers.

The Policy Regarding the Schools

We discovered that there were many things we could not do. We found that we must take no responsibility and initiative in the management of the school system. In so great a piece of machinery as this, there must be one plan, directed and managed by those who have been trained for it. Interference by outsiders is disastrous. This is true even of those who think they know what should be done and who wish everyone well.

Harmony is always necessary to success. Any friction must be adjusted or the opportunity for accomplishment is destroyed. If it cannot be adjusted, the club might as well disband. It can accomplish nothing but disturbance. Any leader who creates friction will defeat whatever good she may undertake. Anyone who assumes leadership in a parent-teacher association must do so with a sense of service; if she does it for the sake of aggrandizement, she, too, is defeated before she begins.

Politics in Parent-Teacher Club

All politics must be kept out of the club. Even those with a superficial knowledge of human nature can see how politics would tear the organization to pieces. Its membership is varied, with people from every walk in life, with all sorts of ideas, and with friends in every situation so that partisan or personal allegiance is impossible.

This does not mean that members of parent-teacher associations should not be interested in the election of school-board members. On the contrary, they should be the most interested, due to a knowledge of conditions in the school, which they have learned from membership in the school club, and their greater understanding of the type of men best able to serve as directors. But, this interest and activity on their part should be as citizens and patrons, not as members of the school organization.

The Conduct of Meetings

We found, too, in our patrons' club that we must not have too much business. We must not lose sight of the purpose for which we were organized, in the business of the organization. We tried to keep our sessions within an hour and made an effort to keep them snappy, interesting, helpful, and informal.

Naturally, the success of such clubs depends largely on the leaders, who must possess tact, intelligence, an understanding of the meaning of education, and who have a desire to be helpful to children, teachers, and patrons.

Keeping Up-to-Date in School Administration

Orville C. Pratt, Superintendent of Schools, Spokane, Wash.

One of the most difficult yet highly essential tasks of the progressive administrator is that of keeping up-to-date while on the job. This can be done to some extent by an exchange of views with fellow schoolmen. Still better is the actual visitation of progressive school systems. Even more enlightening are the courses in school administration at the big college or university summer schools. But the best means of keeping up-to-date, without which the task is likely to be inadequately performed, is the systematic reading which the administrator does.

The word, "systematic," is used advisedly as no mere incidental or casual reading will suffice. What is needed is the careful reading, analysis and *briefing* of new books and periodicals as they are printed.

No matter how carefully one may read educational literature as it is issued, it is impossible to hold in mind all the information necessary to handle matters of administration. Frequently time is lacking for the making of a thorough investigation after an issue arises. Information must be easily and instantly available when needed or else it is quite likely not to be used at all.

The writer has used a plan by which he can always have needed information at hand. Following are the essential features of the plan: (1) Brief each article or chapter read; (2) make notes on uniform size of loose paper, say 8½"x11"; (3) place on a given sheet only notes relating to a single topic; (4) file all sheets relating to one topic in a folder 11¾" long with one side 9" wide and the other 9½" wide; (5) arrange the folders in alphabetical order in a letter file 12" wide.

The first requirement of briefing each article or chapter read is necessary in order that the thought may be quickly grasped. If, then, it should seem advisable to refer to the original article or chapter this may be done. Incidentally it should be said that the briefing of every article or chapter should begin with a sufficiently full statement of its source so that it may easily be located again in any library. For example, on the topic, "Budget," the brief of a SCHOOL BOARD JOURNAL article would begin as follows: "School Budgets and Budget Procedure, Wallace Emerson, A. S. B. J., Aug., 1925, 52-53."

The brief should not be merely a boiling down of the original into briefer compass. Rather it should be as concise a statement as possible of whatever the reader regards as probably of direct use to himself sometime. A five-page article might not take more than a single page of notes or it might take ten pages. The reader must constantly have in mind the usefulness of what is noted.

The second suggestion is that the notes be written (or preferably typewritten) on one side of loose sheets of paper 8½"x11" in size. This size is not material except that it is of the so-called "letter size" for which files are commonly made.

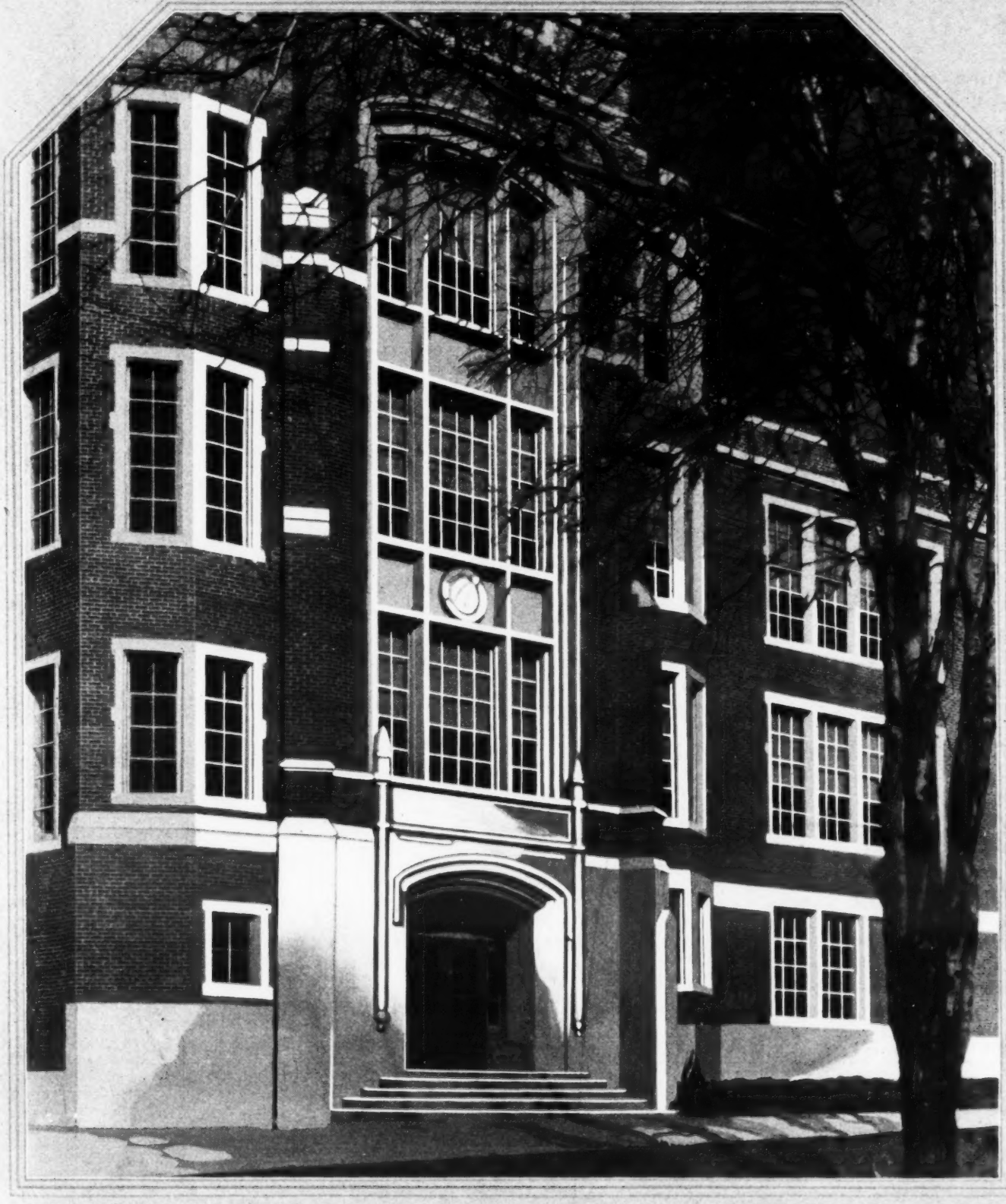
The third suggestion is that each sheet should have the topic written at the top and that only material relating to that particular topic should be placed on that sheet. If the notations drawn from an article or chapter take more than one sheet, the sheets should be numbered and fastened together by a pin or paper clip.

It may seem to some that the suggestion of making notes on loose sheets and of confining those on any one sheet to a single topic is so obvious as not to need mentioning. My experience with schoolmen in summer-school work, however, leads me to believe that many of them place their notes indiscriminately in bound notebooks. I recall having one man say to me that he had four bushels of notebooks, but didn't know how to find anything in any of them.

The fourth suggestion is to file all sheets relating to a single topic in a folder 11¾" long with one side of the folder 9" wide and the other side 9½" wide. The extra half-inch on the one side is for the purpose of writing on the folder the name of the topic concerning which it contains notes. As the administrator goes on with his note-taking he finds that topics divide themselves up into a number of subtopics for each of which he may eventually wish to have a folder. For instance, take the topic, "Teachers," which naturally subdivides into the topics, "Teachers—Ethics"; "Teachers—Insurance"; "Teachers — Meetings"; "Teachers — Rating"; "Teachers — Salaries"; "Teachers — Selection"; and "Teachers—Tenure."

The final suggestion is that the folders be arranged in alphabetic order in a letter file. When this is done it meets the requirement of being "easily and instantly available." The schoolman who tries conscientiously to keep up to date in his reading is bound to run across innumerable helpful suggestions, ideas, and devices. But he has not properly safeguarded the value of his reading unless he goes a step farther by making the suggestions, ideas and devices available for instant reference whenever the need arises.

(Concluded on Page 151)



JUNIOR HIGH SCHOOL, WINTHROP, MASS. ARCHITECTS: BRAINARD & LEEDS, BOSTON

IN the Winthrop Junior High School, shown here, Fenestra Projected Windows perform a double service: they contribute beauty and stateliness to the exterior, at the same time making the classrooms comfortable and attractive for the pupils and teachers who are in them the greater part of the day.

The exterior speaks for itself. Inside the building these modern steel windows flood each room with evenly distributed light; they afford easy and sure ventilation, by opening at a finger's touch. Yet they close tight when the sudden storms come. And they are economical windows because they are easy to wash and because their small panes can be easily replaced when broken.

Fenestra Projected Windows have much to offer those who influence the choice of school building materials. Details will be found in the Fenestra catalog—free on request.

DETROIT STEEL PRODUCTS COMPANY, P-2266 E. GRAND BOULEVARD, DETROIT, MICHIGAN
CANADIAN METAL WINDOW & STEEL PRODUCTS CO., LTD., TORONTO, ONT., CAN. FACTORIES: DETROIT, MICH., OAKLAND, CALIF., AND TORONTO, ONT., CAN.

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FOR MANY YEARS WE HAVE SPECIALIZED IN BONDS OF SCHOOL DISTRICTS. UNUSUAL PROBLEMS WILL BE GIVEN OUR BEST ATTENTION.

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NEW YORK

SCHOOL FINANCE AND TAXATION

CITY SCHOOL EXPENDITURES

A summary of the expenditures and indebtedness for public schools in 247 cities having a population of over 30,000 has been issued for the fiscal year 1925 by the Department of Commerce. The statistics include only those for public schools under the supervision of a city corporation or of an independent school district practically coextensive with the city corporation. The total population of these cities represents 35.3 per cent of the entire population of Continental United States.

Operation and Maintenance

The payments for the operation and maintenance of the city schools for 1925 amounted to $571,827,138, the cost per person in these 247 cities being $14.03, and representing 37.5 per cent of the expenditures for maintenance and operation of all general departments of the cities. (General departments, as the term is here used, do not include public-service enterprises, such as water works, electric-light plants, or similar public-service utilities.) The above payments do not include interest paid on bonds issued for school buildings, which, at four and one-half per cent, would amount to approximately $39,000,000. So that the per capita payments for school operation, maintenance, and interest for 1925 in these cities were approximately $15.00, while the corresponding payments for 1915 were only $6.08 per capita.

For 146 cities covered by the reports of the Department from 1905 to 1925, the cost of operation and maintenance of all general departments has increased, but the cost of schools has increased at a much greater rate than that for other general departments. The increase in cost of operation and maintenance for schools was 85.3 per cent from 1905 to 1915, and 209.4 per cent from 1915 to 1925; while that for other general departments was 77.2 per cent from 1905 to 1915, and 127.0 per cent from 1915 to 1925.

Permanent Improvements

For 1925 there was expended in outlays for permanent improvements for schools $206,908,813. This represented 26.8 per cent of the total outlays for permanent improvements in all departments, and exceeded those reported for any other single department except that of highway construction (streets, roads, etc.), for which the outlays amounted to $317,498,333 in 1925. As shown by the attached table, in all classes of cities the outlays for schools formed a much larger percentage of the total outlays in 1925 than in 1915.

Indebtedness

For the cities having over 30,000 population in 1925 the funded or fixed debt for general purposes amounted to $2,987,369,056, and that for schools amounted to $874,058,824 or a per capita of $21.45, the school debt representing 29.3 per cent of the total. In 1915 for the 204 cities in this class the debt for general purposes amounted to $1,969,601,729, and for schools, $344,783,605, or a per capita of $11.06, the school debt representing 17.8 per cent of the total. The per cent of the total debt issued for school purposes is much larger for the smaller cities. For the cities having a population of less than 50,000 in 1925, 40.3 per cent of the total was for schools, while in the cities having over 500,000 population, 21.1 per cent was for schools.

Value of School Property

For the 247 cities having over 30,000 population in 1925 the total value of land, buildings, and equipment of general departments amounted to $4,973,436,227. Of this total $1,864,335,933 was for schools, or 37.5 per cent of the total. In 1915 for the 204 cities in this class the value of land, buildings, and equipment of general departments amounted to $2,576,491,410, of which $695,123,593, or 27.0 per cent, was for schools .

FINANCE AND TAXATION

—The annual report places the total assets of the Seattle, Wash., school system at $18,444,230. The total bonded indebtedness is placed at $9,524,000. The total receipts for the year ending June 30, 1926, amounted to $5,326,228.

—Chestertown, Md. The Kent County (Md.) schools are maintained at an annual cost of more than $150,000. A plan of consolidation is being put into operation. The county superintendent met with the state superintendent of education during the latter part of December, 1926, to outline a program. The plan calls for many one-room and two-room schools to be closed and the children transported to a central school. One school has already been closed.

—The public schools of Pennsylvania are now providing schooling for 1,800,000 children, and employ 54,000 teachers. During the two-year period from June 1, 1925 to May 31, 1927, the school districts of the state will expend approximately $400,000,000. Of this sum, the state contributes $65,190,109 and the federal government $1,900,459. The total of $67,090,568 is expended under the direction of the state department of public instruction, 87.8 cents going directly to some part of the public-school system.

Of this 87.8 cents 62.4 cents, or a total of $41,910,000 will go directly to school districts to reimburse them for teachers' salaries; 1.7 cents or a total of $1,984,000 goes to vocational education, 1.5 cents, or a total of $1,000,000, to reimburse school districts for the transportation of pupils. Then 1.2 cents, or $779,505 goes to finance various educational activities, particularly the care of handicapped children. The sum of $1,224,500 is set aside for the education of the deaf and blind, and $5,250,000 for normal schools. The remaining sum goes to universities and colleges.

—The school board of Erie, Pa., has taken steps to oppose the passage of the Jones law which seeks to eliminate the per capita tax collected annually by the board. In the opinion of the school officials, the per capita tax is necessary to the operation of the schools and its elimination would mean the increasing of the tax millage in Erie County.

—Woodbury, N. J. The school board has adopted a budget of $78,810 for the school year 1927-28. Of this amount, $74,310 will be expended for current expense and repairs.

—The school board of Waterford Township, Atco, N. J., has adopted a budget of $21,412.

—The school board of Houston, Tex., in February, disposed of $1,995,000 in bonds at a sale in which seven syndicate bondhouses participated. The Bankers Trust Company of New York, represented by the Second Ward National Bank of Houston, purchased the entire issue, with accrued interest at a premium of $138,842. This was the highest premium ever paid on any Houston bonds, either school, municipal, or county.

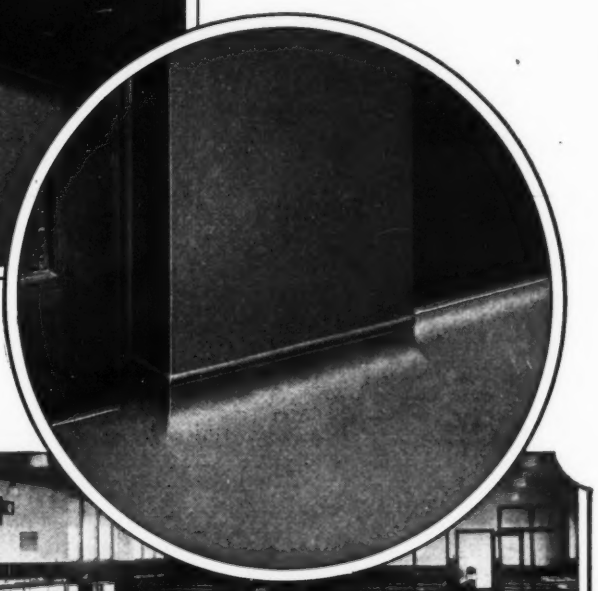
The second bidder for the bonds was the William R. Compton Company of New York which offered a premium of $129,076.

(Continued on Page 74)

BONDED FLOORS
in the John Burroughs School—

CORRIDOR (left): A Bonded Floor of *Gold Seal* Battleship Linoleum—resilient, quiet and comfortable underfoot.

Below: In the circle below is a "close-up" view of an economical, yet effective, sanitary cove base in the Burroughs School. Made of linoleum to match the over-all floor color, it is a great aid to sanitary, economical maintenance.



THE up-to-date, resilient floors in the John Burroughs School are a fair sample of the complete service Bonded Floors Company offers to school authorities. This service includes: Consultation with you and a survey by our floor specialists to ascertain the most economical "laying plan"; floor materials manufactured in our own mill; installation by our own skilled mechanics; and a Guaranty Bond against repair expense, issued by the U. S. Fidelity & Guaranty Co.

Write us for illustrated booklets describing school floors.

BONDED FLOORS COMPANY, INC.

New York Boston Philadelphia Cleveland Detroit San Francisco

CAFETERIA (above): A sturdy Bonded Floor of *Gold Seal* Battleship Linoleum gives heavy duty service and ease of cleaning.

OFFICE (above): A floor of *Gold Seal* Marble-ized Tile gives dignified individuality as well as durability and ease of maintenance.

JOHN BURROUGHS SCHOOL, DETROIT, MICH.: *Architects*, Malcomson and Higginbotham. Only one of many Detroit schools equipped with Bonded Floors—tangible evidence that Detroit authorities consider Bonded Floors a highly satisfactory answer to the school flooring problem.

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WEATHER stripping, to be permanently effective, requires more than correctly designed, well made weather strips—exacting attention to weather strip installation is equally important. Therefore, Chamberlin exclusively installs its weather strips. And as definite assurance of lasting satisfaction, Chamberlin guarantees and services its equipment "for the life of the building".

The Bennett High School of Buffalo adds another link to the growing chain of evidence demonstrating a nation-wide preference for Chamberlin. This preference rests on the most logical basis. 34 years of outstanding performance and hundreds of thousands of installations prove that Chamberlin is economically the best Weather Strip that money can buy—and that it gives permanent weather stripping satisfaction. Furthermore, it is service-guaranteed "for the life of the building". Inspections of installations made as far back as 1893 show that Chamberlin Weather Strips give efficient service for years after installation, and that there is no perceptible wear on strip or sash. Chamberlin performance, Chamberlin reputation, Chamberlin leadership can best guide you in your choice of weather stripping equipment.

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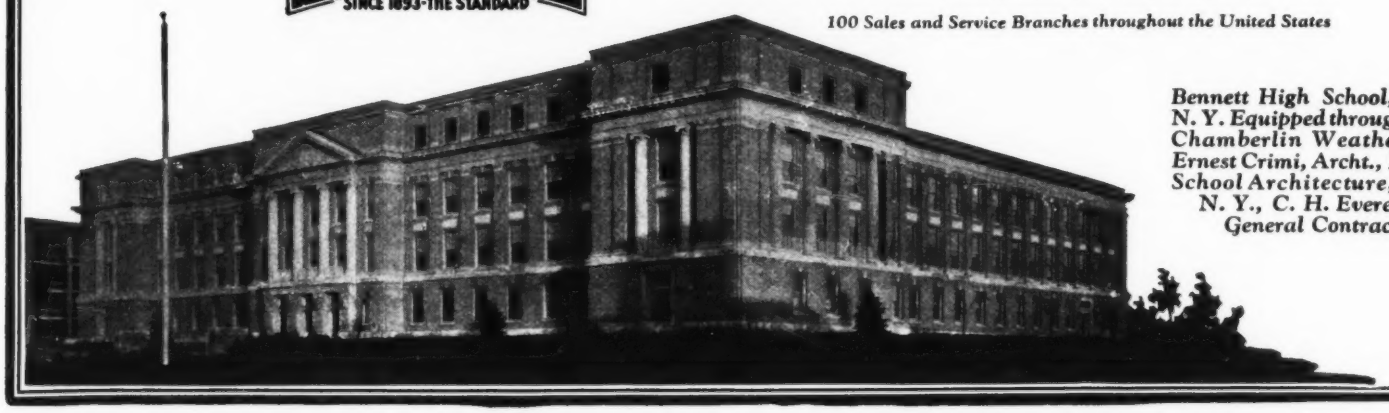

Bennett High School, Buffalo, N. Y. Equipped throughout with Chamberlin Weather Strips. Ernest Crimi, Archt., Bureau of School Architecture, Buffalo, N. Y., C. H. Everett Inc., General Contractors.

FC-158

(Continued from Page 72)

—The school board of Lima, Ohio, has negotiated a loan of $230,000 to run the schools until the tax monies are received. An interest charge of $6,900 will be paid. Last year the board was obliged to raise $336,000 and pay an interest charge of $8,000.

—Dr. R. M. Eubanks, president of the Atlanta, Ga., board of education, has announced that the 1927 budget will call for $3,331,039.79, and that it will require $952,000 more to retire the deficit.

—The budget of the Cincinnati, Ohio, schools was cut by the county budget commission last fall to the amount of $390,000. President W. J. Schroder has announced that a revised budget for 1927 will permit the school system to function without interruption.

—The Denison, Iowa, school district lost $75,000 in the defunct Crawford County State Bank and was obliged to borrow $25,000 to complete the new gymnasium and schoolhouse now under construction.

—Green Bay, Wis. The school board has adopted a budget of $530,094 for the year 1926-1927. The budget provides $330,139 for salaries of instructors and $28,808 for salaries of janitors.

—Boise, Idaho. The school board has this year adopted the budget plan for estimating the school expenditures.

—The money withheld by the New Haven, Conn., board of education from school teachers because of absence goes into the treasury of the Teachers' Retirement fund. It amounts to about $80,000 a year and has helped considerably the fund which now has $700,000. The board of education is seeking a change in the law whereby the absentee salary monies may go in the regular city fund.

—The board of education of Delphos, Ohio, finds that it will have to close its schools by the end of April. The funds at command of the board will not permit the continuation of the schools after that time. The closing of the schools in May and June will not relieve the situation as the teachers must be paid for the full term for which their services have been contracted.

—Ashland, Ky. A loan of $52,588 has been authorized by the city council to be given to the board of education for the maintenance of the schools. The board has given collateral to cover the loan and the money will be refunded when the next tax money comes due.

—Lynn, Mass. The 1927 budget of the board of education calls for the expenditure of $1,265,014, which is $100,000 more than was expended last year.

—Metuchen, N. J. The board of education has approved a budget calling for an expenditure of $91,620, which is $670 more than last year.

—Bound Brook, N. J. The school board has asked for an appropriation of $94,852 to cover the expenses of the schools during the next year. The amount is $10,702 more than was given last year.

—Nutley, N. J. A school budget totaling $430,135 has been adopted by the board of education. This is an increase of $88,000 over last year.

—Malden, Mass. The school board has adopted a budget of $676,125, which is an increase of $56,000 over last year.

—Chicago, Ill. The board of education has adopted a budget calling for the expenditure of $76,860,278, which is $2,715,536 less than was expended in 1926. The budget provides for a decrease of $4,000,000 in the building fund.

—Oklahoma City, Okla. The school board has operated on a cash basis, despite the fact that six months of the present fiscal year have elapsed without the collection of the school tax. Warrants issued by the board were purchased by the school treasurer as an investment of the sinking fund which now amounts to $800,000.

—The legislative committee of the Tennessee High-School Teachers' Association has recommended that the state bear its share of the expense of high-school education by providing a third of the cost of operation. If the recommendations of the committee are approved, it will mean that the high schools of the state will have nearly $1,000,000 for their work, and that the city high schools will receive $25 a pupil just as the county schools do.

—The school budget of Evansville, Ind., provides for an increase of over ten per cent in the main items of the cost of operating the schools. There is a total of $83,023 in additional appropriations.

—Pompton Lakes, N. J. The 1927 budget of the board of education calls for an expenditure of $50 950, which is an increase of $3,580 over last year.

—Hartford, Conn. The school board has asked for an appropriation of $1,059,326 for the operation of the three large high schools. Of the total amount, $851,616 is for salaries and wages, and $80,000 for repairs and additions. Light, fuel, and water call for an appropriation of $50,810.

—An ad valorem tax to produce a state school fund of not less than $17.33 for each school child has been recommended to the Texas legislature.

—New Britain, Conn. The school board has adopted a budget of $1,158,051 to cover the cost of maintenance and to meet a deficit of $13,049.

—Pawtucket, R. I. The school board has adopted a budget of $860,599, which is $62,654 in excess of the amount appropriated last year.

—Newburyport, Mass. The school board has adopted a budget of $153,711, which is an increase of nearly $9,000 over that of last year.

—The legislative committee of the Oklahoma Education Association has asked the legislature to approve a permanent aid plan to provide relief for those schools which are threatened with shortened terms.

—Norwood, Ohio. The board of education has adopted a budget calling for an expenditure of $525,376.

—Fort Lee, N. J. The school board has adopted a budget of $132,500, which is an increase of $10,000 over the amount required for 1926.

—Hibbing, Minn. The 1927 budget of the school board amounts to $1,650,716. Of this amount, $64,180 is for general control, $723,200 for instruction purposes, $214,520 for operating expenses, and $16,676 for capital outlay.

—Atlanta, Ga. The school board estimates that only $2,837,308 will be available for school purposes in 1927. This amount is $1,404,637 less than the approximate $4,252,000 which is necessary to operate the schools and to retire a deficit of $952,000.

—Muscatine, Iowa. The school board has received bids on $75,000 worth of school building bonds.

—"The country earns seventy billion dollars annually and uses only two billion dollars for education," said Secretary Work of the Department of the Interior in a public address recently. "We must continue to fire the imagination, to feed the flames of genius, to stimulate and perpetuate our ideals and aspirations, to keep alive all the humanities and transmit a better, a nobler and finer civilization to our children."

(Concluded on Page 76)

ON the first of March, 1927, Western Electric Inter-Phones change their name, and will be known hereafter as Graybar Inter-Phones.

In material, design and manufacture the Inter-Phone remains the same — only the name is changed. The same high standard of quality—always a feature of the Inter-Phone—is maintained.

Old in service new in name

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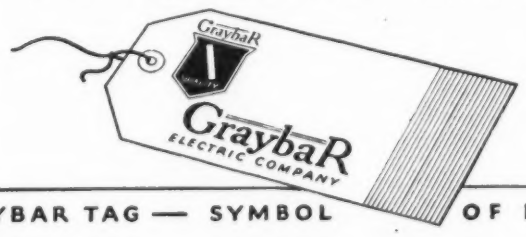

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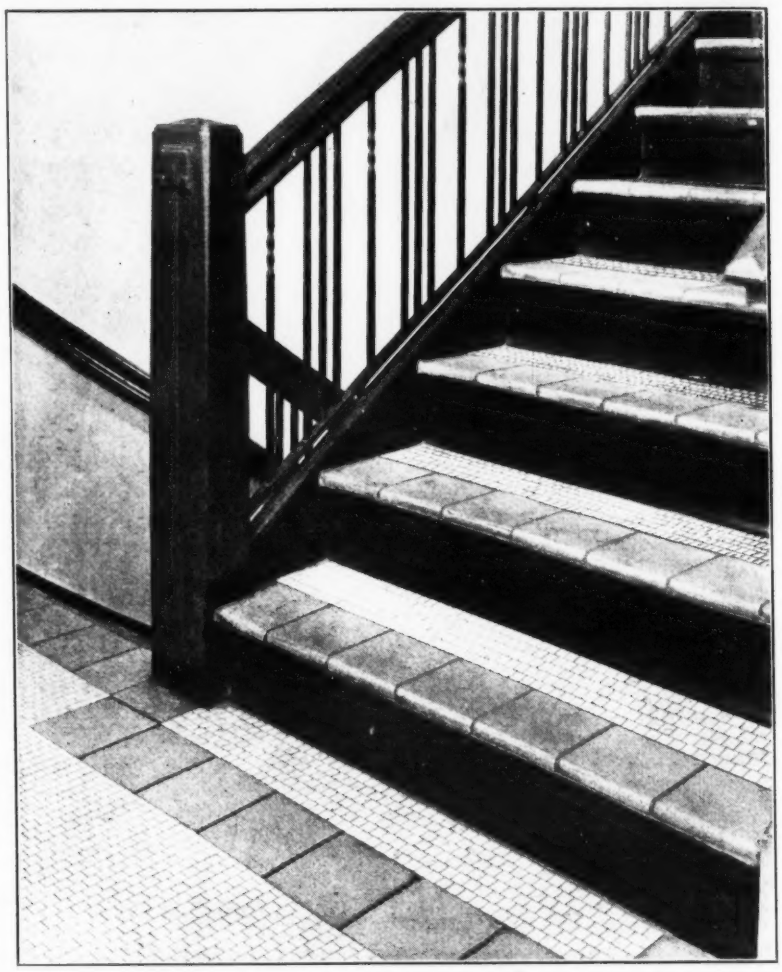

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Alundum Tiles, Treads & Aggregates

(Concluded from Page 74)

—It is pointed out that the state funds of Ohio face a deficit of $4,000,000, and which will affect school support. Under its constitution, the state cannot bond itself to meet this deficit. It must be provided for immediately out of general taxation.

—The school board of Taunton, Mass., maintains a petty cash account of $500. This was recently arbitrarily cut down by the city treasurer to $100. Superintendent Wendell A. Mowry charged that this amount was inadequate.

—The 1927-1928 budget for school maintenance as submitted to the Detroit, Mich., board of education by Supt. Frank Cody, shows a total of $22,195,359. To this is added a deficit of $100,000. It is expected that a total of $5,205,420 will come into the school fund from state and other sources, leaving the net amount to be provided by taxation at $17,089,939.

A COMPARATIVE FINANCIAL SURVEY

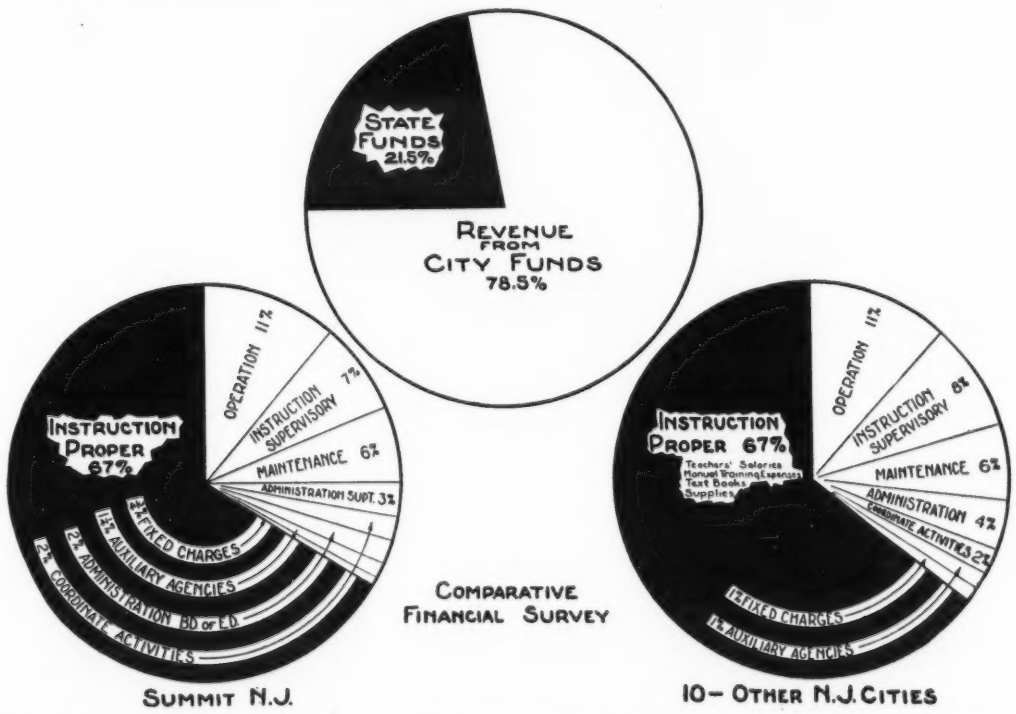
The board of education of Summit, N. J., has reduced its costs to chart form showing the percentages of the several departments. This study was made under the direction of Supt. John B. Dougall. He also provides a comparative statement in which he notes the costs of ten other New Jersey cities. These are Westfield, Madison, Morristown, Plainfield, Glen Ridge, Nutley, South Orange, Maplewood, Ridgewood, and Englewood.

A third graph shows that the school fund is made up of state funds amounting to 21.5 per cent and city funds amounting to 78.5 per cent.

WHY ROCKVILLE BOND ISSUE WON

—The board of education of Rockville, N. Y., needed $400,000 for additional school buildings. It prepared a statement showing that while the population in 1915 was 5,223, it was 10,316 in 1925, and that the demand for school accommodations had grown in the same ratio.

The case was clearly and attractively presented in a pamphlet which gave illustrations of the two proposed school structures, together with descriptive material. A map of the town was also provided, showing just where the new projects were to be located. The two projects, each involving a bond issue of $200,000, were submitted to a vote of the people with the result that one was carried by a vote of 333 to 12 and the other by 330 to 10.



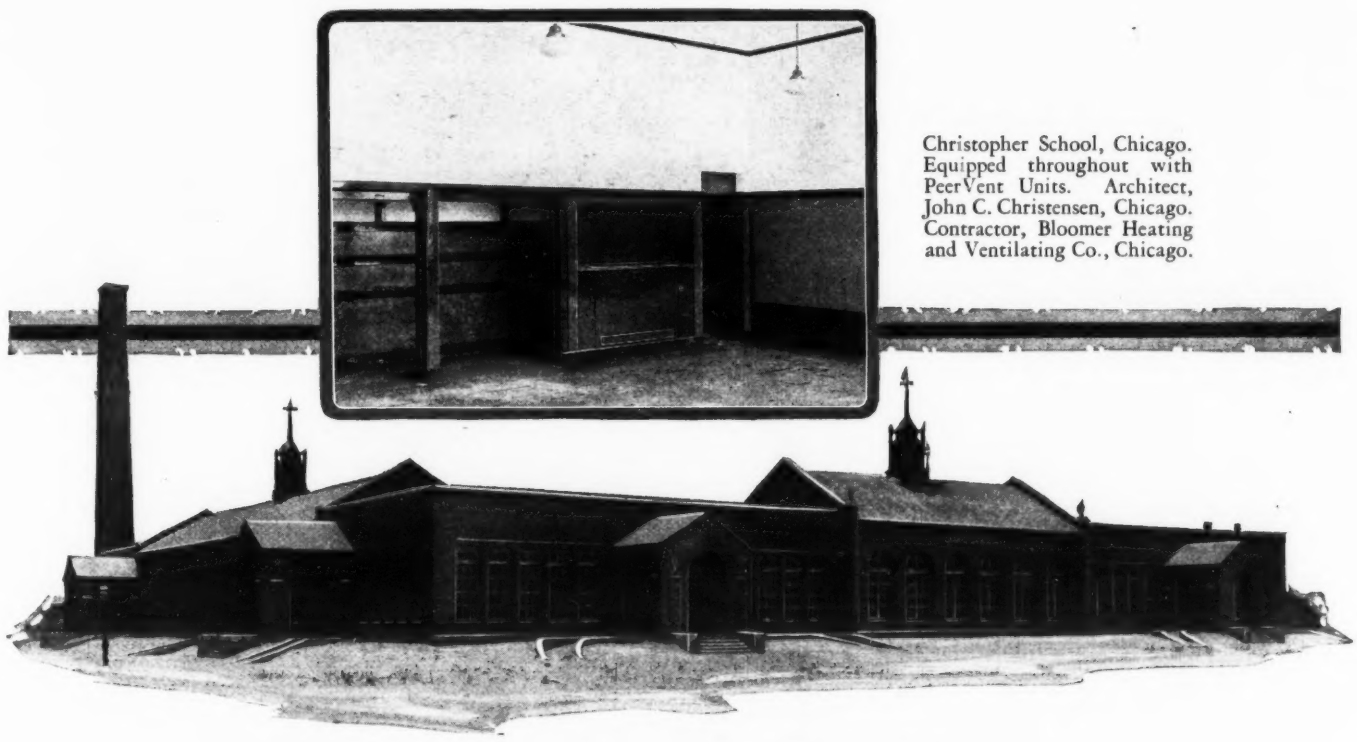
FINANCIAL SURVEY OF SUMMIT, N. J., AND TEN OTHER NEW JERSEY CITIES OF THE SAME SIZE.

The board of education consists of Alfred E. Ives, Jr., president; Michael J. Madigan, secretary; Edna D. Bennett, James G. Joslin, and John H. Scott. William S. Covert is the superintendent. The new projects provide for a new twelve-room building, and an eight-room addition with auditorium.

The Basis of State School Support

The basis of school support in Illinois is founded on the school census. Francis G. Blair, the state superintendent, holds that it has many defects. He says:

"To correct these defects in the present law, the State Teachers' Association has formulated several amendments to it. Two of these amendments provide for special aid to needy districts. The first one provides that the state shall guarantee, to every district which levies at least two per cent school tax for educational purposes but is unable to raise a minimum of eight hundred dollars per each full-time elementary-school teacher, the difference between the amount raised and that minimum. The strength of this amendment is not only in its simplicity, but in its educational soundness. There is no better way of distributing an educational opportunity equitably to all children of the state than by giving to all of them teachers qualified by experience and training. While the plan does not require that the teacher shall be paid the minimum, such an amendment cannot fail to stimulate a desire for better teachers. It would tend to exalt in the minds of boards of education the really important factor in the making of a school."



Christopher School, Chicago. Equipped throughout with PeerVent Units. Architect, John C. Christensen, Chicago. Contractor, Bloomer Heating and Ventilating Co., Chicago.

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"The service of the Company has always been very good on installations that we have supervised."—*Hacker & Hacker, Architects, Palisade, N. J.*

THIRTEEN years spent in building and installing heating-ventilating units have taught Peerless engineers many valuable lessons.

One is that *service* is just as important as sound engineering principles, cooperation just as important as right design, intelligent care in *filling* orders just as important as getting them.

Therefore a comment about PeerVent service like the one quoted above is very gratifying. As much so as another statement received by the same inquirer:

"I consider that they are at all times a little in advance with improvements."—Jacob J. Vreeland, Architect, Dover, N. J.

When you specify PeerVent you specify competent, conscientious *service*—and the latest improvements.

Write for Catalogue and list of installations. If you wish to see our local sales representative, please so state.

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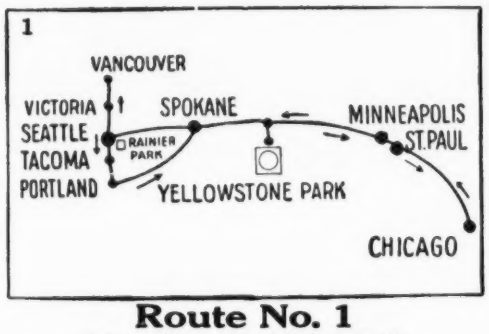
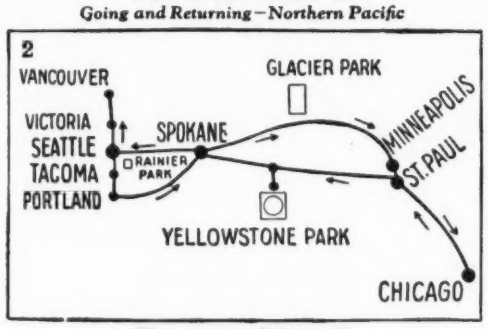
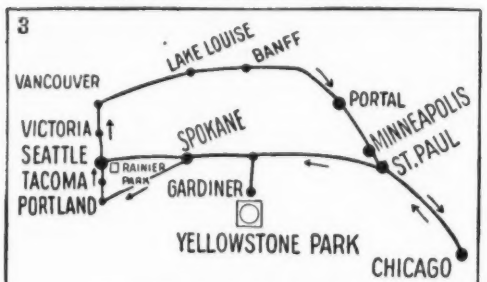


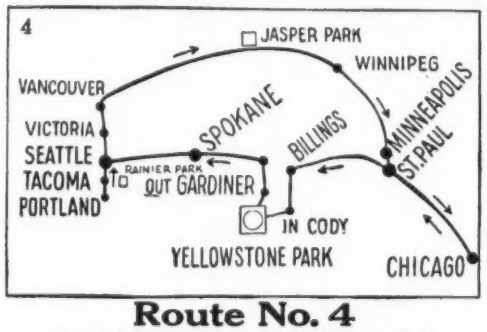
Route No. 1
Going and Returning—Northern Pacific



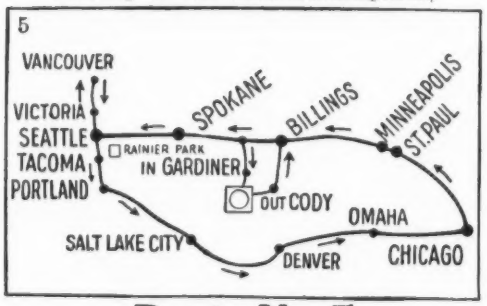
Route No. 2
Going—Northern Pacific and Yellowstone Park
Returning—Great Northern and Glacier Park



Route No. 3
Going—Northern Pacific and Yellowstone Park
Returning—Canadian Pacific and Lake Louise and Banff



Route No. 4
Going—Northern Pacific and Yellowstone Park
Returning—Canadian National and Jasper Park



Route No. 5
Going—Northern Pacific and Yellowstone Park
Returning—Union Pacific

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INTEREST in this book has been widespread and intensive. It seems to supply just the information most desired. It describes the advantages of taking the direct route to the Convention — the Northern Pacific to Seattle!

The N. E. A. Booklet gives a brief suggestion of the wonders of Yellowstone National Park—which may be visited on the way to Seattle. It tells how to get the most out of your trip through the Pacific Northwest.

Then it outlines and briefly describes ten different return routes—Glacier National Park—the scenic Canadian Rockies — through Banff and Lake Louise — or Jasper Park and Winnipeg—the Pacific Coast to California — Salt Lake City — Colorado—the Grand Canyon. I can tell you of others. You have only to choose!

Round trip rail fare from Chicago on any of these routes varies from

$90.30 to $117.35

The N.E.A. Booklet gives you complete information. On the luxurious

"North Coast Limited"

you will follow the trail of Lewis and Clark through the Pacific Northwest. You will pass places where history was made in the early days of daring. The trip to Seattle on the North Coast Limited is an adventure of real pleasure!

Mail the coupon and start planning! I want to help you plan just the trip you want, and I'll be glad to answer any questions.

A. B. Smith

Mail this coupon to A. B. Smith, 755 N.P. Building, St. Paul, Minn.

The Ten Glorious Routes

to Seattle interest me, particularly Route No._____, as I am going to the Educational Convention. Please send me the N. E. A. Booklet containing complete information.

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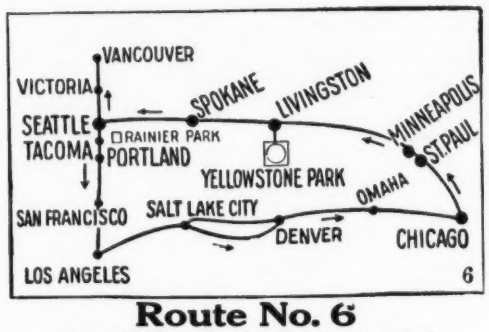
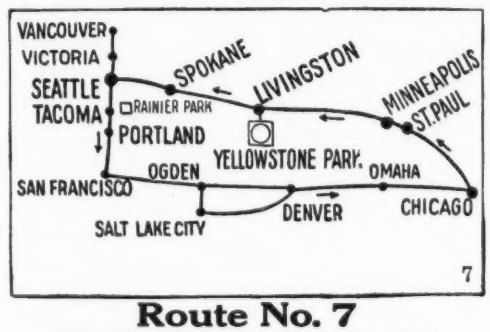
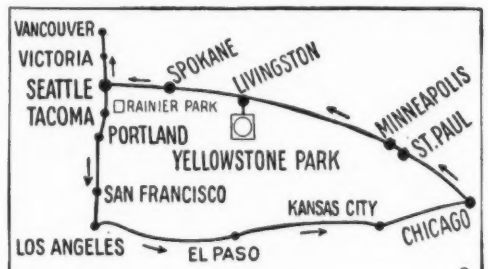
*City*_____ *State*_____



Route No. 6
Going—Northern Pacific and Yellowstone Park
Returning—Via Salt Lake and Colorado

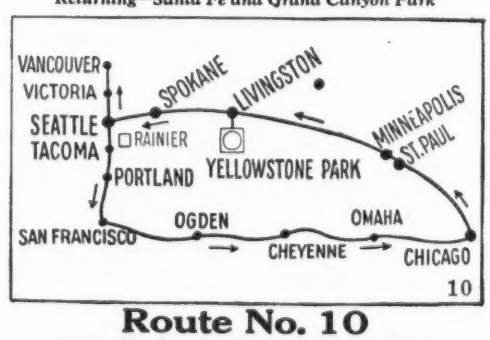


Route No. 7
Going—Northern Pacific and Yellowstone Park
Returning—Via Ogden or Salt Lake and Colorado



Route No. 8
Going—Northern Pacific and Yellowstone Park
Returning—Rock Island

Route No. 9
Going—Northern Pacific and Yellowstone Park
Returning—Santa Fe and Grand Canyon Park

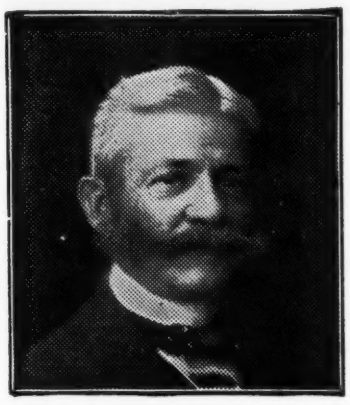


Route No. 10
Going—Northern Pacific and Yellowstone Park
Returning—Southern and Union Pacific Direct

Northern Pacific Ry.

"First of the Northern Transcontinentals"

198



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BUILDING NEWS OF THE SCHOOLS

Important School-Bond Sales of the Past Month
January to February

ALABAMA—Jefferson Co., Schoolhouse Construction, E. B. Erwin, Supt., Birmingham, Ala.	$ 600,000
CALIFORNIA—Los Angeles Co., El Segundo High-Sch. Dist., Mark Keppel, Supt., Los Angeles, Calif.	300,000
FLORIDA—Dade Co., Spec.-Tax Sch. Dist. No. 3, Chas. M. Fisher, Supt., Miami, Fla.	500,000
IDAHO—Lewiston, Ind. Sch. Dist. No. 1, Joll Jenifer, Supt.	275,000
INDIANA—Ft. Wayne, Sch. Dist., L. C. Ward, Supt.	860,000
MICHIGAN — Detroit, School, Frank Cody, Supt.	3,010,000
MICHIGAN—Grosse Pointe Tp., Rural Agricultural Sch. Dist. No. 1	700,000
MINNESOTA—Columbia Heights, High-Sch. Dist., T. Edgar Henderson, Supt.	300,000
NEBRASKA—Lincoln, Sch. Dist., M. C. Lefler, Supt.	500,000
NEW YORK—Buffalo, School, E. C. Hartwell, Supt.	2,000,000
NEW YORK—New York, School Construction, Dr. Wm. O'Shea, Supt.	1,500,000
NEW YORK—Rochester, School Construction, H. S. West, Supt.	600,000
NEW YORK—Rochester, School Revenue, H. S. West, Supt.	450,000
NORTH DAKOTA—Griggs Co., Spec. Sch. Dist. No. 18, Mrs. Mathilda Johnson, Supt., Cooperstown, N. D.	710,000
OHIO—Parma, Sch. Dist.	300,000
OHIO—Rocky River, Sch. Dist., C. G. Pierce, Supt.	350,000
OHIO—Shaker Heights, Sch. Dist., C. B. Cornell, Supt.	445,000
PENNSYLVANIA — Johnstown, Sch. Dist., S. J. Slawson, Supt.	500,000
PENNSYLVANIA — Norristown, Sch. Dist., H. O. Dietrich, Supt.	600,000
PENNSYLVANIA — Pittsburgh, Sch. Dist., Wm. M. Davidson, Supt.	$3,000,000
PENNSYLVANIA — Scranton, Sch. Dist., Rhys Powell, Supt.	2,000,000
TENNESSEE—Memphis, Sch. Dist., R. L. Jones, Supt.	600,000
WASHINGTON—King Co., Sch. Dist. No. 1, A. S. Burrows, Supt., Seattle, Wash.	500,000

BUILDING NEWS

—Cleveland, Ohio. A building program providing for the expansion of the school system over a ten-year period at a cost of $20,000,000, has been presented to the school board for approval. The program will approximate about two million dollars a year.

—Citizens of Fall River, Mass., have presented a protest to the board of education to express their indignation against the lack of school facilities.

—Danville, Va. The school board has asked the city council to issue $100,000 in municipal bonds to make possible the equipment of three new schools in course of erection.

—A fire survey of the city schools of Springfield, Mo., was recently completed by the city fire inspector and his assistant.

—Belleville, N. J. The board of education recently disposed of $247,000 worth of school bonds, realizing a premium of more than $6,000. Mr. C. G. Jones has been appointed as architect for the proposed building operations.

—A high school has been erected at New Smyrna, Fla. Mr. F. H. Bent, DeLand, is the architect.

—Springfield, Mo. An extensive building program has been undertaken following a complete survey of the school plant. It is planned to issue bonds in the amount of $750,000 for new buildings.

—Wellsville, Ohio. The school board has appointed a committee to undertake the renaming of the school buildings. It is the purpose of the board to designate the buildings by name instead of by location.

—Kansas City, Mo. A new school has recently been named the John K. Stark School, after the first dental practitioner in Jackson County.

—Dallas, Tex. An extensive program of building construction is being carried out by the city schools, with the new East Dallas High School heading the list. The school will have a capacity of 2,000 students and will be the largest high school in the city.

—Governor Robinson of Delaware has approved a proposed bill which seeks to appropriate $2,000,000 of the surplus state funds for the construction of new schools during the next two years.

—The new high school at Mooresville, Mo., was formally presented by R. W. Roberts, architect, to President G. R. Reynolds of the school board, who in turn presented it to Superintendent J. R. Yelton.

—Cincinnati, Ohio. The board of education, in making up a list of the famous men and women whose names are to grace the windows of the Western Hills High School, approved four names submitted by pupils and rejected four others. The four names approved were Lincoln, Washington, Franklin, and Pasteur. The names selected to replace those rejected by the board were Jefferson, Nightingale, Gutenberg, and Socrates. The name of Clara Barton may be substituted for Florence Nightingale because of the length of the latter name.

—Waterbury, Conn. The school board has adopted a building program which is intended to take care of the building needs for the next two years. The building of schools in outlying sections, and additions for overcrowded sections, will receive attention during the next few months.

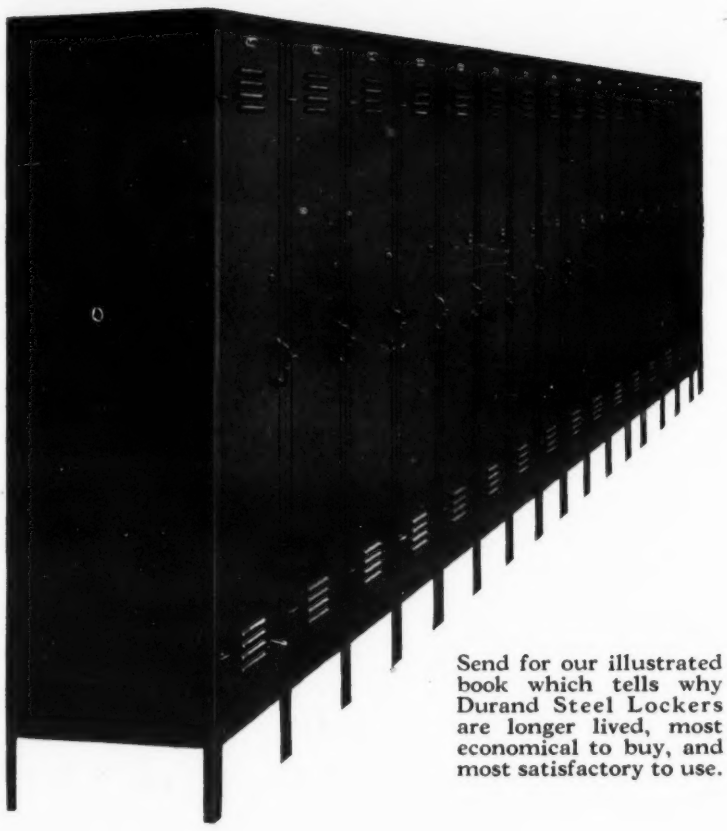
—Pittsburgh, Pa. The school board is completing an extensive building program covering the last few years. Of the entire program, there now remains the completion of two building projects, as well as the erection of the school administration building. The board has let the contract for the Herron Hill High School, which is to accommodate 1,260 students, and to cost approximately $950,000.

—Los Angeles, Calif. Mr. W. E. Record, business manager of the board of education, in his annual report, shows that a total of 223 school buildings, totaling in value $13,942,720, have been completed in the city since July, 1925.

At the present time, 39 buildings of all classes are under construction, and plans for twenty others are in preparation. An expenditure of nearly $8,000,000 will be made on buildings under construction and those about to be erected. The most expensive building now under construction is the Wiggins Trade School, which will contain 120 rooms and will cost $723,382.

The George Washington High School, for which plans have been prepared, will contain 69 rooms and an auditorium, and will cost $550,000. The

"Red" Clinched The Title!

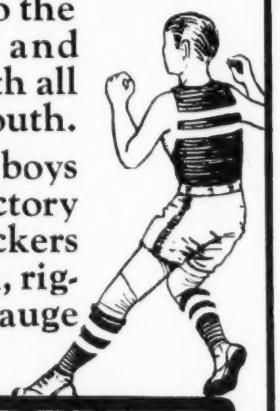


Send for our illustrated book which tells why Durand Steel Lockers are longer lived, most economical to buy, and most satisfactory to use.

"Ted to Jimmie to Red"—the same combination that kept the team in the running all season, won the title after trailing throughout the first period and almost to the final whistle.

Then, a thousand husky school boys crowded into the locker room, kicking and pounding the lockers with all the vigor of healthy youth.

But—a thousand school boys celebrating an athletic victory can't damage Durand Lockers because of correct design, rigid construction and 16 gauge doors.



DURAND STEEL LOCKER CO. INC.
1501 First National Bank Building
Chicago, Ill.

Garfield School, completed in October, 1925, cost $567,263.

The report shows that slightly more than $20,000,000 has been expended for buildings alone during the last year and a half. Nearly $2,500,000 will be expended for new buildings and additions during the present year.

—A survey of school building needs has been made by Supt. M. E. Pearson, of Kansas City, Kans., with a view of determining the location of a proposed new high school. The survey sought to determine the present center of high-school population, the center ten years ago, and what indications point to as a center ten years hence.

—The school board of Alliance, Ohio, has planned a $10,000 warehouse for the storage of books and school paraphernalia.

—Glendale, Calif. A site costing $170,000 has been purchased for a new high school.

—Petaluma, Calif. The citizens recently voted a bond issue of $135,000 for new school buildings. Of the total amount, $75,000 will be spent for elementary schools, and $60,000 for an addition to the high school.

—Dr. William J. O'Shea, superintendent of schools of New York City has announced that by June first, ten new schools will be opened. These schools will provide 4,544 high-school and 9,298 elementary sittings. For the opening of the fall term, ten other elementary buildings, with accommodations for 9,833 pupils will be opened. Among the new buildings to be completed are the Jamaica high school with 3,338 sittings, and the Richmond high school with 1,158 sittings.

—The total value of the school property in New Jersey is $212,743,705, which is an increase of $27,065,828 over the preceding year.

—New York, N. Y. The board of education plans to spend a total of $14,850,000 for new elementary schools. They provide for Manhattan, one new building; for the Bronx, six; for Brooklyn, nine; for Queens, twelve; and for Richmond, one. Temporary buildings are planned to cost $48,000.

The proposed restricted building program for 1927 will involve a cost of $35,915,000. The cost of construction and equipment for new buildings totals $27,600,000. Of the total, $3,500,000 will be spent for sites, $500,000 for improvement of playgrounds, and $3,400,000 for new buildings for the textile high school. New buildings proper will cost a total of $31,000,000 and high and special schools $16,150,000.

—Charleston, Ill. The school system of Charleston recently suffered the loss of its high school building by fire. This loss was especially severe, since the district had become rather heavily bonded by reason of a forced building campaign caused by a tornado a few years ago.

Faced by insufficient insurance and bonding power for financing a building project, the board of education took advantage of a provision of the school law which permits an increased tax in districts operating under unit control.

An election was held in which four propositions were submitted to the people: (1) To build a new high school; (2) to issue bonds in the amount of $30,000; (3) to increase the tax rate for education to a total of three and one-half per cent; (4) to increase the tax rate for building purposes to a total of one and three-fourths per cent. All four propositions were carried with decisive majorities. As a result, the tax rate for school purposes stands at five per cent, whereas under the general school law, it would have been two and three-fourths per cent.

—Detroit, Mich. The board of education will name one of its new schools after Judge E. O. Durfee, who has completed his fiftieth year on the bench

—The school buildings of Naugatuck, Conn., in the interest of safety, are inspected once a month by the local fire marshal.

—A new $40,000 consolidated school was occupied at Porter, Oklahoma, in December last. The school obtains more than three fourths of its pupils from the surrounding farm homes, transporting them to the school in seven trucks, at a cost of fifteen cents per pupil per day. The school has an enrollment of 335 pupils, 70 of whom are high-school pupils.

—Rocky Mount, Va. The corner stone of the new high-school building was laid on January 29. This is the first unit of a $350,000 building program for this year. The other units are an elementary school for whites, and one for colored children. The program was made possible by the passage of a bond issue several months ago.

—Kingsport, Tenn. The school board is constructing a new four-room, one-story modern school at Cedar Grove. The work is well under way and the building will be ready for occupancy in the fall.

—The little red schoolhouse of one room is steadily losing out in Kansas, while other schools show a gradual growth, according to State Supt. J. W. Miley. The one-teacher school costs the most per pupil, and has fewer pupils per school than any other type. The decline of the one-teacher school, in the opinion of Mr. Miley, means actual advancement in an educational way.

—New York, N. Y. Acting upon the suggestion of the board of superintendents, the board of education asked for a ruling from the corporation counsel as to whether the law regulating the showing of motion pictures in theaters applies to the showing of similar pictures in classrooms where noninflammable film is used.

Replying to the board's inquiry, the corporation counsel rendered its decision which concluded as follows:

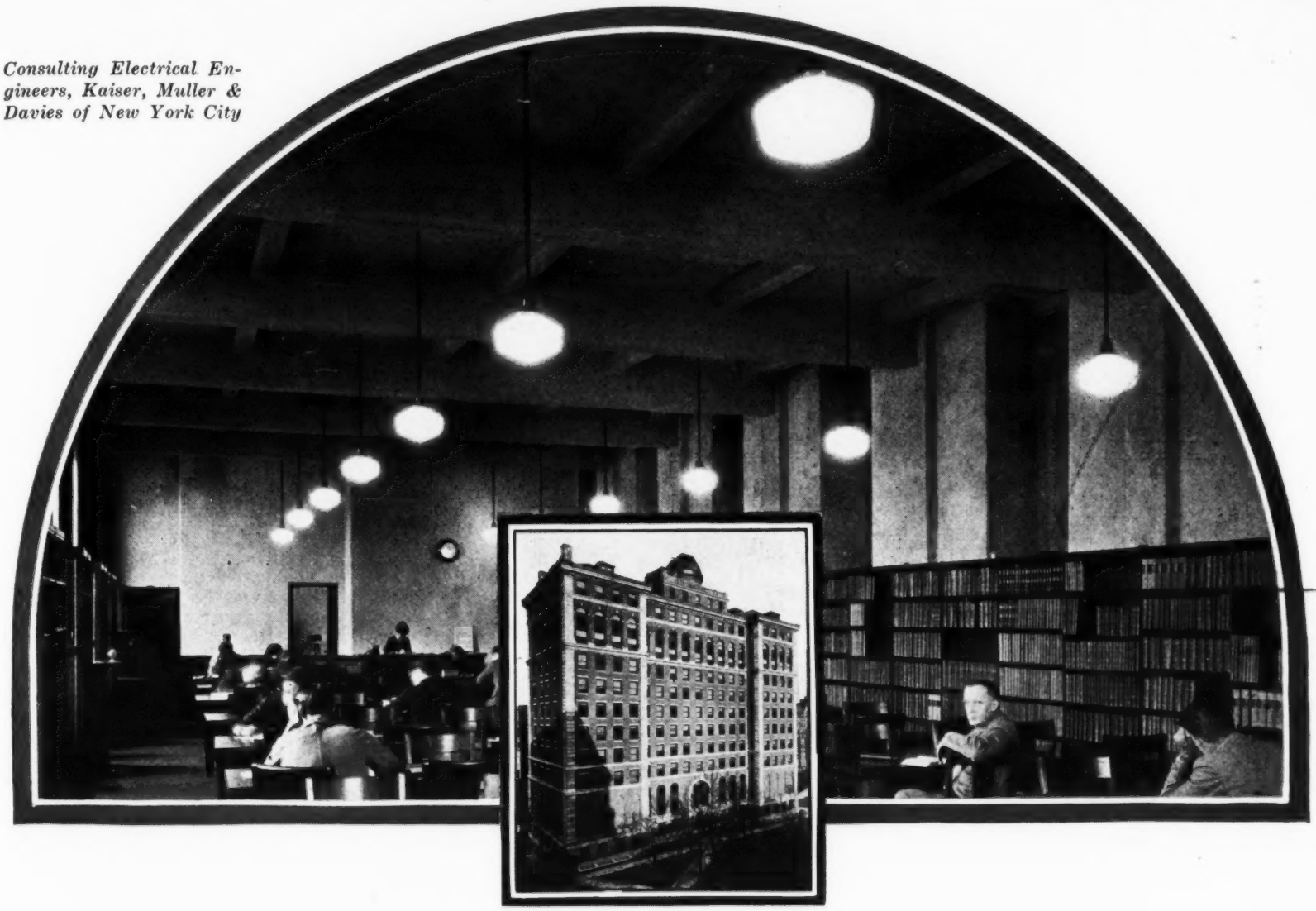
"There are two types of projectors of motion picture film; one is termed the professional type of standard width commonly used in theaters and motion-picture houses; the other, of lesser width, the nonprofessional or miniature type employing slow-burning film. The latter type may be used without a booth and the operator thereof does not require a license, provided, however, that an enclosed incandescent electric lamp only is used in connection therewith and that the machine so used cannot be made use of for the wider film used in the professional type of machine.

"As I have been informed that the motion-picture apparatus proposed to be used by the board of education is of the professional type, and would, therefore, permit the use of the wider kind of film, I am constrained to advise you that the apparatus may not be used unless located in a permanent fireproof booth and operated by a duly licensed operator."

—East Grand Rapids, Mich. The board of education has awarded contracts totaling $443,287 for the erection of a high school. The building will be erected from plans prepared by Architects Robinson & Campau of Grand Rapids, and will represent an investment of nearly half a million dollars, bringing the total value of school property up to $750,000. The building will have a large auditorium, shops, and gymnasiums, and will be completed for use in February, 1928.

(Concluded on Page 82)

Consulting Electrical Engineers, Kaiser, Muller & Davies of New York City



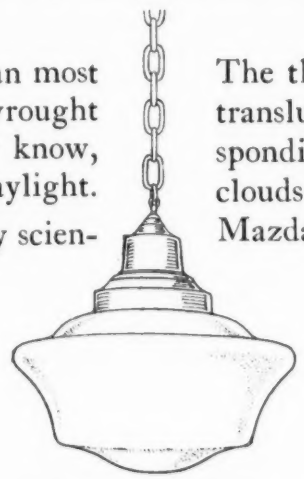
Columbia University Scientists Select CELESTIALITE Next to Daylight

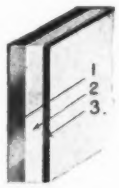
The committee of scientific men which directed the choice of equipment for the new fifteen story Physics Building for Columbia University selected Celestialite after careful comparative tests.

SCIENTIFIC men know better than most of us what a marvel Nature has wrought in creating the human eye and they know, too, that Nature made the eye for daylight.

So that when Celestialite is selected by scientists we have unprejudiced and convincing evidence that Celestialite gives the best substitute for actual daylight.

Celestialite is a patented glass of three layers — made in strict accordance with the best scientific knowledge.





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First, one of crystal-clear transparency—for body and strength.

Next, a layer of opalescent consistency — to diffuse the rays and soften the light.

And finally, a layer of blue glass —to whiten, clarify and perfect the light.

The three layers of glass — one clear — one translucent white — and one blue — (corresponding in effect to the clear air, the white clouds and the blue sky) combine with the Mazda lamp to give an illumination which is the closest to actual daylight which man has been able to produce for general lighting purposes—it is "Next to Daylight" — a light soft and restful to the eyes but powerful to see by.

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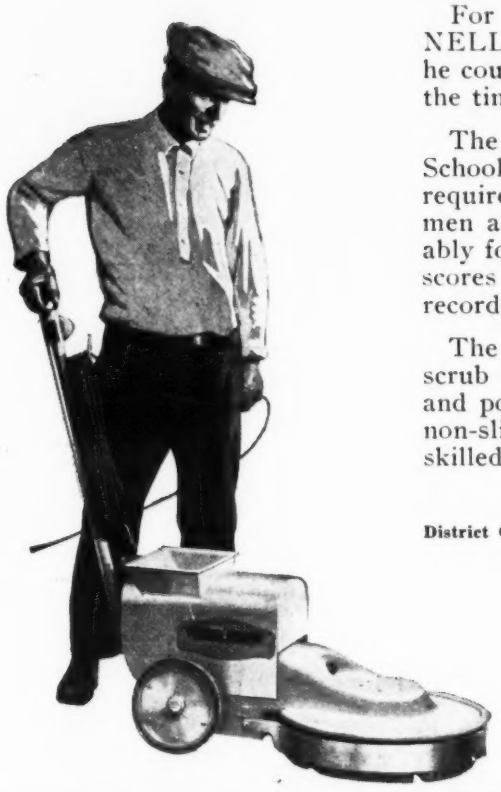

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For if he were using a FINNELL Electric Floor Machine he could get **cleaner** floors in **half** the time and with half the effort.

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The FINNELL does more than scrub efficiently. It applies wax and polishes any type of floor to non-slippery brilliance without skilled help. It operates under school desks, chairs, benches. It works with the ease of a vacuum sweeper. Three cents pays for the electricity used by the FINNELL in a solid hour's work. It does its job with minimum upkeep cost.

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Yale University, New Haven, Conn.
Board of Education, Elizabeth, N. J.
Board of Education, Pawtucket, R. I.
Board of Education, Oakland, Calif.
Board of Education, Mt. Clemens, Mich.
University of Kentucky, Lexington, Ky.
State Normal School, Pottsdam, N. Y.
Independent School District, Buhl, Minn.

(Concluded from Page 80)

—Somerville, Mass. Plans have been prepared by Frank Irving Cooper, Boston, for an addition to the high school, to cost $830,000. The new section will be erected in the form of symmetrical wings, connected by corridors to the central building. A gymnasium will be erected east of the present school group. The plans also provide for the fullest utilization of the existing central building, to which will be added, in the rear, a boiler house, to heat all the buildings in the group. The west wing will house the offices of the superintendent, the assistant superintendent, and the clerks. The east wing will contain more than thirty classrooms, toilets and lavatories, rest rooms for teachers, and storage space.

The gymnasium, which will be a two-story detached building, will have a main floor, divided into sections by a folding curtain, making it possible to utilize the whole space for important school gatherings. There will be a stage at one end and a balcony, so that the room may be used as a hall. The main gymnasium will be fitted with the usual equipment and with collapsible bleachers which may be folded up against the wall during exercise periods. The basement will contain dressing rooms, showers, lockers, quarters for the school physician and physical director, and rooms in which visiting teams may congregate. The gymnasium will be so arranged that it may be used under all weather conditions.

—Green Bay, Wis. A new high school has been erected at a cost of approximately $700,000. The building is located on a 23-acre site and has a stadium accommodating four thousand persons. One grade school has been built and additions to two other schools have been erected during the past year.

—The new Walnut Grove schoolhouse at Council Bluffs, Iowa, erected at a cost of $50,000, was opened by President Thomas McMillen of the board of education. Mrs. Hattie Harl and Henry K. Peterson, members of the board, delivered addresses. One of the features of the occasion was an address by Superintendent Theodore Saam.

THE CENTRAL CITY (KY.) HIGH SCHOOL

For some years following, the building constructed in 1899 housed the entire school population. The industrial growth of the city, which in a comparatively few years grew into a population of 5,000, however, made it necessary that more room be provided. Hence, the new junior and senior high school just completed.

The campaign for the new building was approached in a systematic manner. A monster parade by the school children was staged and the necessity for the new structure convincingly advanced. The cost was $90,000 of which $56,000 was raised by bond issue, the balance by direct taxation. The bond issue was carried 4.5 to 1.

The new building is located on a 4½-acre wooded campus, providing not only an attractive site, but also a sufficient space for an athletic field. The dimensions of the building are 150 by 129 feet. The exterior of the building consists of red brick with concrete trimmings. Besides first and second floors there is a basement which houses the gymnasium, dressing rooms and shower baths, furnace rooms, domestic-science and manual-training rooms, and girls' reserve lunchroom.

On the first floor are located seven recitation rooms, administration office, library, balcony of gymnasium, and restroom. The science and commercial departments are located on the second floor. An outstanding feature is the arrangement of the physics and chemistry laboratory between the lecture rooms. As soon as expedient an auditorium room is to be added over the gymnasium. The latter is 75 feet by 50 feet in size, with hardwood floor and walls of glazed tile. Bleachers rise from the floor. The balcony extends around the entire gymnasium with seating capacity for 800 persons.

The walls of the corridors are finished in glazed tile up to a height of 4½ feet while the remainder of the walls and ceiling are left in rough white plaster. The corridors are also equipped with set-in metal lockers. The architectural labors were performed by Harry E. Boyle & Company, of Evansville, Ind.

HIGH SCHOOL, CENTRAL CITY, KY.

Mr. Tim Meinschein, Superintendent of Schools. Harry E. Boyle & Co., Architects, Evansville, Ind.

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STAIRWAYS, under the constant attack of many feet day after day, require a wearing surface of exceptional durability.
Stedman Reinforced Rubber Flooring is built to withstand many years of exacting service. In your class rooms and corridors it is quiet and comfortable under foot.
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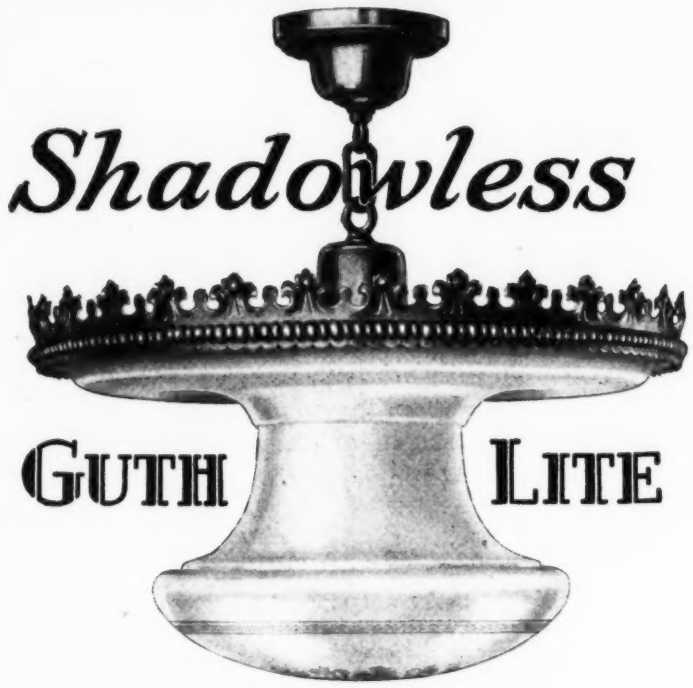

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The New School Lighting Fixture

Prevent Eye Strain

Surveys show that 25 percent of our school children have defective eyesight.

Healthy eyes under normal conditions consume from ten to fifteen percent of the total bodily energy. Under abnormal conditions this energy consumption may run as high as fifty percent.

Repeating the year's instruction for only two percent of the pupils who fail because of bad eyesight, poor lighting and resultant strain, costs the state more than the entire lighting bill for the year.

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A. C. Monahan, Formerly U. S. Bureau of Education

District of Columbia Budget for 1926-1927

Appropriations for the District of Columbia public schools for the coming year, just provided by Act of Congress, are a disappointment to the District school officials. A total of $15,735,186 was requested by the board of education; a total of $11,999,046 was finally voted by Congress. Of this, $9,212,296 is for current expenses, and $2,786,750 for the five-year building program.

This is an actual increase for current expenses of approximately $600,000. A considerable part of this is necessary for the teachers' retirement fund, and $100,000 for fireproof curtains and alterations on the stages of several high schools.

The principal decrease in this amount appropriated from the amount requested was in the building fund, and the fund for the purchase of school sites. For these two purposes $5,728,280 was requested and $2,786,750 granted.

The principal items of current expenses are: Administration $733,240; School Attendance $29,900; salaries of teachers $5,662,640; Vacation schools $30,000; Night schools $94,500; Community Centers $41,000; Care of buildings and grounds $575,000; Fuel, gas and electricity $250,000; Furniture and equipment $189,136; Repair of furniture and equipment $100,000; Books and supplies $175,000; Repairs and improvements $555,000.

Interhigh-school Athletics

A free for all "scrap" of a thousand students on the basketball floor who rushed to the assistance of two fighting players has caused the discontinuance of public interhigh-school basketball series among the District of Columbia high schools.

Similar situations as those causing this rush exist in many cities throughout the country. Keen feeling against other schools of the city develops often in student bodies in the larger cities. Action such as taken in this Washington case, is a temporary measure. Permanent relief comes only through constant training in sportsmanship for the entire student body. This is now contemplated in the District of Columbia.

The action is a joint agreement of the five high-school principals together with Mr. Kramer, supervisor of high schools, and Dr. Frank W. Ballou, superintendent of schools. The resolutions of the committee of principals is as follows:

"We, the principals of the five high schools, deprecate the episode which occurred recently in the basketball game and have taken the following action:

"1. The present interhigh-school basketball series shall be discontinued, but this action shall not apply to outside games.

"2. The above action shall be taken as a precedent and similar action will be taken in the future whenever unsatisfactory conditions develop.

"3. Steps shall be taken at once to build up within the several student bodies an interhigh spirit which will make such occurrences impossible in the future."

Especial disappointment came in the refusal of congress to appropriate $121,100 requested for 74 additional teachers. These are necessary to keep the schools up to standards because of the increasing enrollment. In regard to this the superintendent of schools, Dr. Frank Ballou, says:

"It means materially increasing the size of classes in elementary, junior, and senior high schools; the impossibility of organizing small classes of atypical children who need special instruction, and the assignment to regular classroom instruction of all supplementary teachers now employed in our larger elementary schools, to give children who need it, the individual instruction necessary for them to keep up with their respective classes.

"While these reassignments of teachers can and will be made if necessary, it should be clearly understood by the citizens of Washington that this saving of $121,100, brought about as a result of eliminating provision for any new teachers for the school year 1927-28, will mean a reduction in the quality of instruction and the elimination of special types of instruction, which the school system has heretofore been able to provide.

"The strength of any school system lies in the quality of the teaching, which in turn depends on classes of reasonable size and suitable building facilities. It is greatly to the credit of all parties concerned that up to this time appropriations for teachers have been sufficient to keep most classes in the public schools of Washington within reasonable size, and to provide a small number of teachers for the enrichment of instruction which it is the right of the children to enjoy.

American Home Study Council

Eleven of the reputable well-known correspondence schools have formed a national organization to set up ethical standards for this important field of American educational endeavors. The organization has the support of the Carnegie Foundation for the Advancement of Teaching and has been promised the cooperation of The Federal Trade Commission. Headquarters have been established in the District of Columbia.

Dr. J. S. Noffsinger, a former educational expert of the Carnegie Foundation, is in charge of the work. A few years ago Dr. Noffsinger conducted a nation-wide survey of adult education, and it is partly on the basis of information obtained at that time that he now is proceeding. The survey convinced him that the correspondence school was one of the most essential factors in the field of adult education, that there were reputable concerns with the highest ideals in the business, but that the field as a whole was a prolific source of fraud.

"There are 500 schools now on our record." Dr. Noffsinger said. "They take in at least $70,000,000 every year. At least ten per cent of this business is downright fraud. At least half of it is questionable."

The present efforts of the American Home Study Council are devoted to checking up on misleading advertisements and promises, and giving the concerns a chance to change them before presenting the cases to the Federal Trade Commission. Almost all of these concerns do an interstate business which makes them subject to Federal jurisdiction in cases of fraud.

Cubic-Foot Building Costs

Comparative cubic-foot-building-prices of certain eastern constructions will be of value to school authorities about to erect buildings. The figures are from the Dow Service Daily Building Reports in an article by Allen E. Beals. They contrast January, 1927, costs with those of both January, 1926, and July, 1926. While the cubic foot cost in other sections differ from these eastern figures, nevertheless they will serve as an index for comparative purposes. It will be noted that there is

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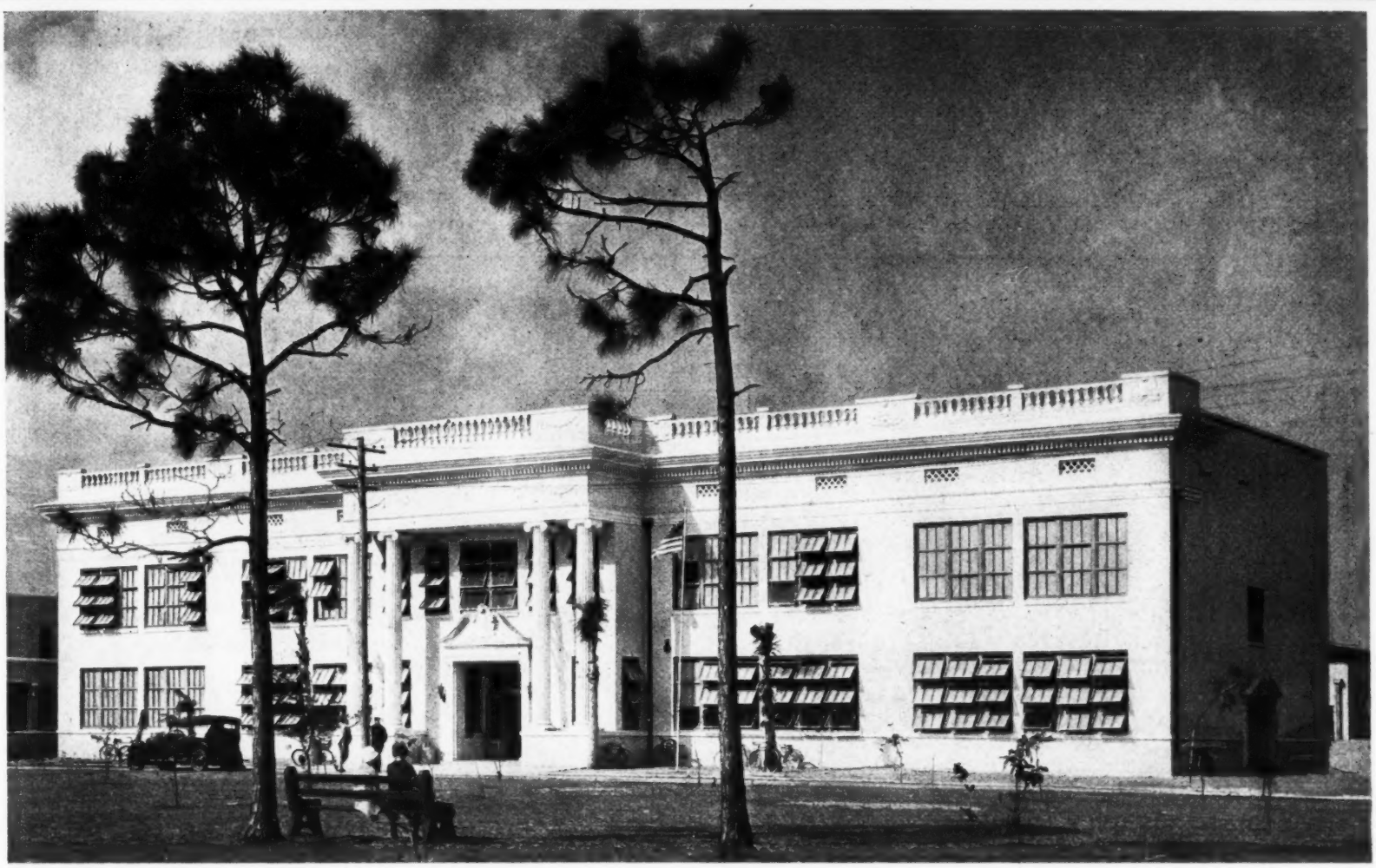

TRUSCON DONOVAN AWNING TYPE WINDOWS used in the Miramar School, Miami, Florida; Mayer & Dobson, *Architects*; Ward & Ward, *Contractors*.

DAYLIGHTING AND VENTILATING THE SCHOOL

Double-Hung Windows

The Model "A" Solid Steel Double-Hung Window gives unusual refinement in architectural and structural design. Massive strength and rigidity, weather-tightness as well as beauty are outstanding qualities.

Donovan Awning Type Windows

For sunlight without glare and maximum ventilation without draft. Simple in construction, strong and durable. They are easy to operate, no poles, chains or hooks required. Permit use of large areas of glass harmonizing with the architectural design.

Architectural Projected Windows

The Truscon Architectural Projected Window is one of the most popular and practical types for schools. The ventilators operate entirely outside the frames without interference with shades. A large variety of standard sizes of these windows makes it possible to meet practically every architectural treatment.

Standard Projected Windows

This type of window operates the same as the Architectural Type but is made for use in rear elevations of the school given over to manual training, forge shops, machine shops, etc. Also practical in pent houses, boiler rooms, etc.

Products of the Truscon Laboratories

Truscon's Laboratory Products include Waterproofings, Floor Hardeners, Steel Sash Putty, Plaster Bond, Technical Paints, Varnishes, Enamels, etc. All of these products play an important part in school construction and maintenance.

ANNOUNCING
A SCHOOL BUILDINGS DEPARTMENT
To Meet the

CHANGING STANDARDS IN SCHOOL CONSTRUCTION

America owes much to its educators, Engineers and Architects whose studies of the influence of the school building on the health and welfare of the pupil have raised the standards of school construction to their present high level. Their understanding of the effects of poor light and improper ventilation on the child's progress and future, and their realization of the hazards of combustible construction have resulted in better and safer schools for our children.

It is natural that the Truscon Steel Company, with a quarter-century of experience in manufacturing permanent building products, should have been in the van of this progressive movement. And now, with the pressing need for more and better schools it is natural that this company should announce the formation of a School Buildings Department, dedicated to the service of School Boards and School Architects. If you are planning the construction of a new school—avail yourself of this specialized service. It involves no obligation.

We have in preparation an illustrated data book covering Permanent School Construction, full of interesting information. Write for a copy. The distribution is free.

MAKING THE SCHOOL FIRESAFE AND PERMANENT

Reinforced Concrete Floor Systems

Truscon has developed several systems of reinforced concrete construction for schools. Locktyle is a permanent pan construction of economy and stability. Wydespan offers particular removable form economy under certain conditions and ordinary Removable Floreforms have certain properties that make their use advisable under still other conditions. Truscon Kahn and Rib Bars and Improved Column Hooping meet every requirement of economical concrete reinforcement.

Steel Joist Construction

For school floors of moderate span, Truscon Steel Joist Floor Construction is favored.

Steeldeck Roofs

Truscon "I-Plates" offer a major solution to the problem of economical roofs for schools. Particluarly over Auditoriums and Gymnasiums the Steeldeck Roofs offer big savings because of light weight. Radiation and fuel consumption are markedly reduced through the insulation on these roofs.

Trade School Buildings

Many School Architects and School Boards are taking advantage of Truscon Standard Buildings for trade school units. Quickly erected, economical in cost, always salvageable, they are ideal buildings used for manual training trades purposes.

Truscon Hy-Rib and Plaster Bases

¾" Hy-Rib is used for balcony forms and reinforcement, stair rail forms and reinforcement, pipe trench cover slabs, etc. ⅜" Hy-Rib for partitions furring, etc. A-Lath is the most economical plaster base known to the plastering craft.

TRUSCON

TRUSCON STEEL COMPANY Youngstown, Ohio

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ABOVE — A typical FERALUN installation showing a slip-proof stairway. FERALUN Stair Treads can always be counted on to carry the heaviest traffic SAFELY —whether it is ordinary usage or a case of emergency.

RIGHT — A school stairway that is a menace to life. Worn, slippery and unprotected, these steps might easily cause bad accidents to students and even start a panic in case of fire.

FERALUN
Anti-Slip Treads

A SYMBOL OF SAFETY

If you have let the question of stairway repairs slip by for some time you should make a check-up without further delay. Worn and unprotected stairs can be easily repaired with Feralun Anti-Slip Treads and once they are laid your stairway problems will be eliminated since FERALUN will probably outlast the building.

Slip-proof stairs are essential for the protection of children's lives and your first repair problem is a check-up on the stairs and steps in your schools.

Write for Detail Sheets of Feralun Style "S" Structural Treads.

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136 Federal Street	1700 Walnut Street	Conway Building	Erie Bank Building	Farmers Bank Building	444 Market Street

(Concluded from Page 84)

no decrease in the cost of construction, but an increase varying from two to ten per cent.

	Jan. 1926	July 1926	Jan. 1927
Public school, complete elementary, Brooklyn	$0.39	$0.42	$0.42
Public school, complete elementary, without mechanical equipment, suburban	.46	.48	.48
Public school, complete elementary, with mechanical equipment, suburban	.52	.54	.54
Hospital, plumbing, heating, no sprinklers, suburban	.62	.64	.66
Church, brick and stone, no steeple, no equipment	.54	.56	.56
Factory, brick and reinforced concrete, elevator, 4 stories	...	...	.46
Factory, mill construction, wood frame, corrugated iron	.17	.20	.20
Factory, concrete, no sprinklers, no elevators	.25	.27	.27
Dwelling, frame, detached suburban, 1½ stories	.39	.45	.45
Dwelling, private construction, fireproof, brick, suburban	...	.50	.51
Residence, stucco on frame	.42	.43	.43
Residence, fireproof, New York City	.50	.52	.55

Copper Roofing Investigation

An investigation of copper roofing with reference to its durability and effectiveness is under way by the U. S. Bureau of Standards in cooperation with the Copper and Brass Research Association. The study concerns particularly the strength of soldered seams, the strength of corrugated sheets, temperature effects, and similar problems.

The type and size of seams and the amount of solder used are based, at present, on individual opinions or local practice, since there is a lack of numerical data. A series of tests recently completed was planned to remedy these conditions. Comparative tensile tests were made on lap and single-lock seams, as these types are in most common use for flat seam roofing and gutters. The factors taken into consideration were the direction of rolling and thickness of the sheet, the kind of flux, and the manner of pretinning the edges of the sheets to be joined.

Although the data have not yet been entirely worked up, the following general conclusions are evident:

1. Lap seams wider than one fourth inch are stronger than single-lock seams which are tinned by hand on the job according to the usual practice.

2. If the edges of the sheets to be joined are pretinned by dipping in tin or solder, single lock seams are as strong, or stronger, than the sheets for all thicknesses tested.

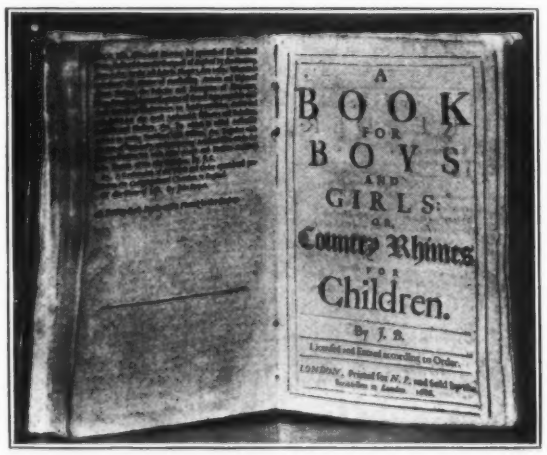
3. Lap seams three-fourths inch wide are as strong, or stronger, than the sheets for all thicknesses tested.

4. A relatively great increase in the amount of solder gives a slight increase in strength to single-lap seams tinned by hand.

5. Direction of rolling of the sheets and the type of flux used have practically no effect on the seam strength.

Under conditions of severe corrosion, copper for corrugated roofing or siding appears to offer advantages over the more usual materials. Since corrugated copper sheets have not been used for these purposes, loading tests have been made to determine the proper form of corrugation, thickness of material, and purlin spacing required under the roof loads which may occur. Sheets of several thicknesses and of different corrugations were tested under uniform loading over three different spans. Because of the peculiar elastic properties of copper the deflection of a sheet under load will continue to increase with time at a decreasing rate. Also, when the load is removed, there will be a residual deflection which will decrease with time approaching a constant value. In order to evaluate these time effects, each sheet under test was subjected to three periods under load alternating with three periods without load, and daily measurements of the deflection were made. The results are not yet available.

Flat-seam construction is used on roofs of very slight pitch and in box gutters. Temperature variations may cause buckling, or under extreme conditions, tearing or cracking of the sheets and also of the seams. The dimensions of the sheets, the character of the seams, and the type of attachment to the sheathing may have an important bearing on the magnitude of the temperature effects. The size of the sheet is economically important, since it determines the total length of seams required. Tests are in progress in which the effects of temperature variations are being studied on full-size roof panels varying in construction.



THE MOST VALUABLE CHILDREN'S BOOK.

The book illustrated, a slender 12 mo. volume by John Bunyan, printed in 1686, has been brought to America at a cost of $10,000. It will become part of the Harvard Library collection.

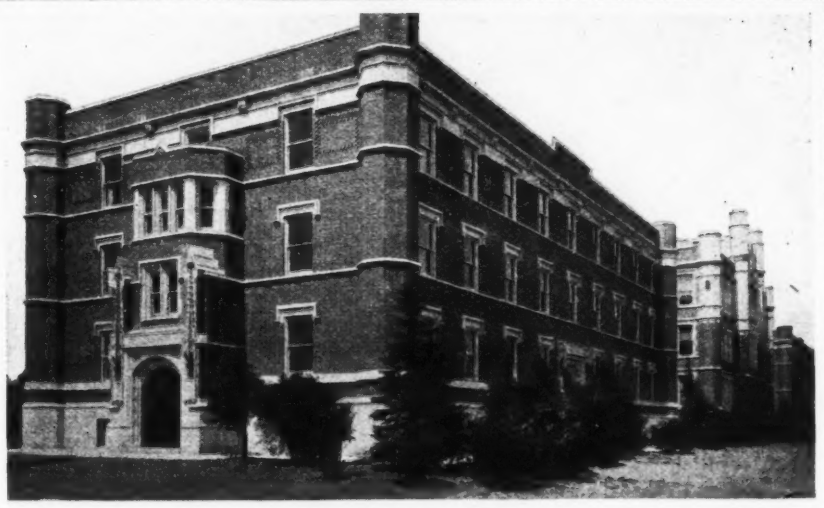
Improved School Accommodations in New York —Statistics prepared by Supt. William J. O'Shea of New York City show that there was considerable improvement in school accommodations during the year ending December 31, 1926. During the year part-time was entirely eliminated in the Manhattan elementary schools, and greatly reduced in Bronx Borough. In addition, 10,537 children were taken out of special classes during the twelve months. There was an increase in part time of 9,526.

The total day-school enrollment was 995,432, of which 65,743 was part-time, and 48,287 special schedule.

Practically all of the part-time increase was limited to the high schools and elementary schools of the Brooklyn and Queens Boroughs, which have been growing faster than new schools could be built. The increase in the high schools has been attributed to the fact that the Jamaica High School is not ready for occupancy, and the New Utrecht High School has a considerable increase in register.

Supt. O'Shea, in his report, shows that in comparison with the register of December, 1925, this year's register shows an increase of 6,028; while the junior high schools increased 6,504 in register and the kindergarten and first-year classes increased 482 and 2,841, respectively, the other grades in elementary schools dropped 3,799.

FLOORING



Concordia College, Bronxville, N. Y.
E. L. TILTON AND A. M. GITHENS, *Associated Architects*
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The AMPICO

may now be used to assist class piano instructors in teaching

THE MELODY WAY

The recordings of pieces from this course have been made by W. Otto Miessner, director of

MIESSNER INSTITUTE

of Milwaukee, Wisconsin
and the originator of the system

THE recordings are based on modern pedagogical principles as applied by Mr. Miessner to piano teaching. Each piece is first played completely, then repeated phrase by phrase so that the pupil may imitate the composer's playing during the progress of the piece. Finally each selection is arranged so that the pupil may play his solo part as a duet with Mr. Miessner.

The Miessner Institute has prepared a special edition of the course to correlate with the recordings. Copies of this edition are furnished in the box with the recordings. Complete teacher's manuals are available as well, showing how to organize and teach piano classes, and how to use the Ampico in conjunction with the Melody Way.

Supplementary Material

Tunes for Two

Three recordings of secondo parts to duets using well known folk songs, arranged and played by Sturkow Ryder. Four selections are included in each recording, as well as an interesting harmonization of the major scale of the key in which the melodies are written.

The sheet music of *Tunes for Two* is published by Carl Fischer, Inc., and is provided in the box with each recording.

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EDUCATIONAL DEPARTMENT

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SOUTH HILLS HIGH SCHOOL, PITTSBURGH, PENN.

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If you are still fussing with keys

follow the example of Mr. Winner, Principal of South Hills High School, Pittsburgh. Here is his letter.

The Dudley Keyless Lock immediately solved his locker problem — eliminated the nuisance and expense of lost and misplaced keys and gave his students positive protection.

THE DUDLEY will do the same for you. You have only to try it to be convinced. Send today for your sample Dudley Lock for free examination, also our easy financing plan.

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WILLIAM M. DAVIDSON, SUPERINTENDENT
PITTSBURGH, PA.

SOUTH HILLS HIGH SCHOOL
H. E. WINNER, PRINCIPAL
I. A. TIMLIN, VICE PRINCIPAL

February 4, 1927

Triple Metals Corporation,
Chicago, Illinois.

My dear Sirs:

We studied this lock question at great length before deciding to try out thoroughly your Dudley keyless lock.

It is needless to say that any type of key lock is a great nuisance for so many different people have opportunities to misplace keys. Keys are either lost or frequently locked in the lockers, necessitating breaking of locks. We have had none of these troubles with the Dudley lock and do not have any reports of pupils opening locks other than their own.

This last semester we ordered 400 of these locks which we are selling or renting at a nominal charge to the pupils of the high school. I believe that within the year practically 90% or more of our pupils will be using the Dudley lock in preference to any other type. It gives a maximum of protection.

Very truly yours

H. E. Winner

The Contributions of Modern Education to Specific Subject Technics[1]

Orlie M. Clem, Syracuse, N. Y.

Modern teaching technic, unlike a woman's hairpin, is not a general instrument or process to be used in all kinds of situations. There are different kinds of teaching situations which require specific technic. The preceding statement is casually admitted by all, but few teachers recognize in practice its real meaning. The chief contribution of modern scientific education to classroom teaching lies in its insistence that different subjects, and different materials within subjects, require different teaching technic.

Interpreting the Results of Scientific Experiment

H. C. Morrison, in his book, teaching in the secondary school, indicates that the first question asked by any teacher in presenting a unit of work in any field should be, "what 'attitude' or ability am I trying to bring about in my pupils?" Too many teachers think in terms of isolated phases of the attitude or ability rather than in terms of the attitude itself.

The tendency to mistake a phase of the process for the "attitude" itself is shown in the case of a boy learning to swim. The father of the boy inquires of the swimming teacher, "How is my boy getting on in swimming?" The teacher says, "He can put his hands into the water and make ten strokes." The father does not know from this reply whether his boy can "swim" or not. The father wants to know if his boy can swim. The boy might be able to make twenty or a hundred strokes and still not be able to swim. The fundamental idea applicable to this case of motor learning applies to all teaching. We are interested in the "adaptation." Too many times in our teaching and in our measurement in examinations, we measure not "adaptation" but "lesson performance." "Lesson performance," in terms of the swimming illustration, means the making of a stroke. The "lesson performance" attitude among pupils is indicated by such attitudes as the following:

1. Do I add or subtract in solving this problem?
2. That's what it says in the book.
3. What do I do next?
4. How much ground do we cover?
5. How much time do we spend on this?
6. The "con" and "recite" attitude.
7. Am I going to "pass"?
8. "Thank God, I am done now with American History."

A pupil who has made the primary "adaptations" in arithmetic can use the fundamental processes with a fair degree of speed and accuracy in actual situations. This is the functional test of an "adaptation." Can and does the individual use the "adaptation" in an actual situation? One who has made the elementary "adaptation" in the reading of French can read the French language with some degree of proficiency. The "adaptation" in French does not consist in the ability to conjugate an irregular French verb. This alone is "lesson performance." The above discussion should make clear that the end goal is the "adaptation" and not "lesson performance."

Types of Teaching Technic

The classroom acceptance of the "adaptation" conception is basic. All materials of the curriculum may be thought of in terms of five types of teaching technic: "science" type, "appreciation" type, "language-arts" type, "practical-arts" type, "pure-practice" type. The real teacher or as Dr. Bagley has used the designation, "Master teacher," is one who sees her materials in terms of these five types of technic.

The objective of the "science" type of technic is the securing of an "intellectual understanding." This "intellectual understanding" shows the relation of the particular unit of work studied in the scheme of cause and effect. The method in this type of technic is that of reflection on experience. The following will illustrate: A teacher in a social-science class is presenting the unit of work, "Liberty under the law." She desires that her pupils get an "intellectual understanding" of what liberty under the law means. To secure this understanding or "adaptation" means that the pupils have some realization as to what their own duties and responsibilities are under the law, compatible with desirable liberty. In this unit of work the pupils make a study of Magna Charta, the English Bill of Rights, the American Constitution, etc. Pupils may learn the significant sentences of Magna Charta and the intricate technicalities of the other documents, and still get no such understanding. "Lesson performance" could easily be mistaken for adaptation.

The "appreciation" type of technic deals with an "affective" response rather than the intellectual. The method is quite contrary to the science type of technic. The method should probably be that of exposure rather than scientific analysis. The following will make the point of view clear. The writer visited an English class some time ago in which the works of Poe were studied. In the midst of the recitation, the teacher said, "Now, children, this is what I want you to get out of Poe." And then she proceeded to tell them what she wanted them to get out of him. This teacher failed to understand that one pupil should get one thing out of Poe and another something else. Teachers need to recognize that there are consumers as well as producers in the field of nature study and the fine arts; also that in the public schools this group is the larger group. Some one has defined a highbrow as one who would rather analyze a thistle than smell a rose. But this is not the "appreciation" technic. The "appreciation" technic recognizes that beauty is subjective, and that "appreciation" is a matter for each individual.

In the "language-arts" technic the objective should be "communication." The method consists in keeping uppermost the central idea to be communicated. This central idea furnishes the pull or drive which carries the message over. An old swimming teacher gave this advice to his pupil, "get into the water, and kick, kick, kick." This is the principle of "initial diffuse movements" and is probably more desirable in the field of "language-arts" technic than the method of detailed analyses and explanations in the beginning. The simplest application of this technic is the infant learning to talk; other applications are a shipwrecked man learning the language of the natives, an American in the Great War "picking up French," or the teaching of reading in the lower grades of a modern school. The modern teacher of reading begins with

[1]Abstract of an address delivered at the annual session of the Associated Academic Principals of New York, December 28, 1926. Abstracted by Mr. A. H. Covell, Oneida, N. Y.

DENZAR

The peculiar fitness of DENZAR for classroom illumination is convincingly demonstrated by thousands of satisfactory installations in all parts of the country.

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the story, and then works down to sentences, phrases, words, and finally the spelling of words in the pupils' vocabularies. The "language-arts" technic demands the direct method in the early stages of a foreign language and eliminates the translation and "transverbalization," characteristic of the older methods. In the teaching of oral and written composition the teacher should be interested primarily that the pupil "communicate," that he have something to say and desires to say it. It is better for a pupil to say "ain't" than to say nothing in an English class.

The objective in the "practical-arts" technic is craftsmanship and skill. The method is that of direct learning chiefly. One does not learn to operate or repair an automobile by reading or philosophizing about it. He learns particularly in this field by doing. This technic applies to shop work throughout. It is the method of manipulation, of handling, of doing.

The objective in the "pure-practice" technic is automatic facility. The method is that of repetition. An "intellectual understanding" probably hinders progress in this field. A teacher who uses flash cards should not give the pupil time to think. This technic should be used in spelling, in the number combinations in arithmetic, and in all other types of work where there are constantly recurring processes which are reducible to definite bonds. It is the technic for learning a series of formulae after they have already been developed by the "science" technic. An office secretary who has many letters to write routinizes her processes. The teacher may well take her cue here from the office secretary. Dr. Rugg of Teachers' College, Columbia, University has well said, "There are some processes in teaching which should be vitalized; but likewise there are others which should be routinized." The good teacher routinizes certain processes and reduces them to the automatic.

SOMETHING NEW ON BOOK REVIEWS

The *Education Review*, edited by William McAndrew, Chicago's illustrious school superintendent, has struck out for greater originality in book reviews. It seeks to depart from staid reviews based upon the "preface" discussion on how to dig into the merits of a school book, by real schoolmen.

An imaginary character, who may be real, and who functions under the name of Papa Rose, indulges in a discussion of the subject. The *Educational Review* says:

Intelligent Admirers:—Papa Rose, our monitor, guide, and friend, produced some letters. "I thought," he said, "you might like to look in the mirror. I have here some comments sent to the *Educational Review* reflecting upon you."

"Isn't your mirror in a vanity case, Captain?" asked Carolina.

"You shall see," answered Papa Rose. "The Bruce, of the clan that publishes the SCHOOL BOARD JOURNAL, has been moved to write that you have gotten away from the style of old stereotyped book reviews and he is glad of it. He says that for twenty years he has had an abhorrence of the 'me-too' stuff as he reads reviews of school books. 'You are right,' he says, 'in having your reviews made by schoolmen. They may be inexpert reviewers, but so much the better. The expert reviewer copies ninety-eight per cent of what the publisher sends him which means little or no professional contribution. If school books cannot stand the acid test of the criticism of the schoolman, they deserve not to be printed.'"

STANDARD NEEDED FOR TEACHERS' MARKS

There is a distinct need for some standard of guidance in the marking of students' work. At the recent convention of the Washington Educational Association, the Spokane section went on record as approving the use of the normal curve as a guide for the distribution of grades in the upper three divisions: Seven per cent, 24 per cent, and 38 per cent. This means approximately 31 per cent in the two lowest divisions.

In a single Seattle school, a rather varied distribution of grades was noted in a study of the marks given by five teachers. These teachers were all teachers of academic subjects, and the distribution was that of students in unselected classes over a period of several years. During this period, one teacher had given 26 times as many failures as another.

An unusually good, or unusually poor, class may be the cause of failure where a single class is considered. Care was taken in the study to consider only large, unselected groups of several hundred.

Teachers whose grades varied widely from the normal distribution explained their distribution in various ways. A teacher who gives a large number of failing grades attempts to show high standards or to acquire a reputation for severity that stimulates pupils to put forth their best efforts in classes. High standards are desirable if properly defined. A high degree of accomplishment due to expert instruction and guidance reflects credit on the instructor. On the other hand, a group of students whose accomplishment is high because of rapid elimination of those who require much of the teachers' time and patience, and who are the tests of his ingenuity, reflects discredit rather than credit on the instructor. Love of a subject, and interest in classwork, prove a much more effective spur to greater accomplishment than fear of penalties.

One instructor fears that awarding grades on the basis suggested would lower the standards to a disgraceful extent.

Another instructor fears that standard tests may be given, that his pupils will make a poor showing and that he will be given a poor rating. This is too often true. Where supervisors, department heads, or principals do not have this new vision of education, uniform tests may be administered to all students in a given subject, and the instructor rated according to the scores of the pupils. Obviously, the thing for the instructor to do is to fail or drop all poor students and those of low ability as early as possible. No one cares to be penalized for painstaking efforts with poor students.

One teacher fears that it would be unfair to apply the normal curve to each of the several segregated groups. In this case the E of the high group would be doing better work than the A of the low group. The curve should be applied to the entire number of marks and not to those for a single segregated group.

A teacher who has an extremely large number of failures feels that he can justify his grades by some standard or other. Individual cases or systems may always be cited where more failures are given in his subject. There are many excellent teachers in such systems and their combined judgment is liable to provide a more desirable and more correct standard than the judgment of an individual who sets up a standard varying widely from that of the whole group.—*M. E. Morgan, Seattle, Wash.*

—Walter L. Bachrodt, superintendent of the San Jose schools, was elected president of the California Teachers' Association. He is a graduate of Stanford University.

—C. E. Rogers, of Johnson City, Tenn., was elected president of the Tennessee Public School Officers' Association at its annual meeting in Nashville, in January.

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WOOSTER Safe-Groove Treads are easily installed on old or new steps of concrete, marble, slate, composition, wood, steel or any material.

Wooster Safe-Groove Stair Treads are different in construction from other threads. More is offered than just a surface of anti-slip material. Deep, safe, open grooves with alternating ribs of abrasive, wear-resisting carborundum are its outstanding features. The anti-slip surface is effective until the entire tread wears out because the abrasive extends clear to the bottom of the tread.

The Wooster Safe - Groove Tread is practically an automatic safety device, because the deep grooves catch and hold safe from the foot, matches, rubber bands and other stairway litter, besides draining off water which comes from wet and snowy overshoes.

We'll gladly send installation details and a list of the many well-known school buildings in which stairways are protected by Wooster Safe-Groove Treads.

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P. O. Box 198-C Wooster, Ohio

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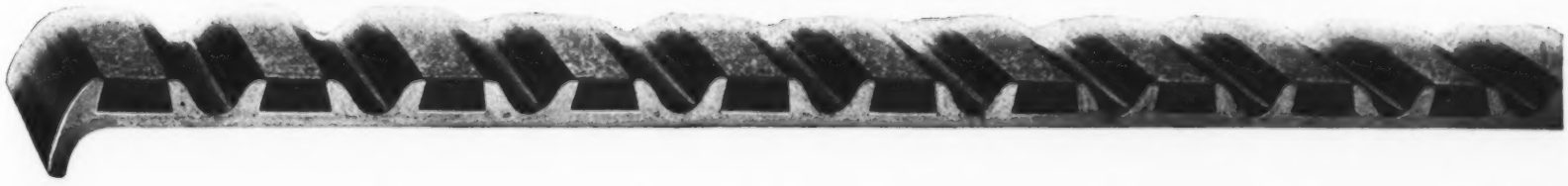
SAFE—GROOVE STAIR TREAD



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The complete reversibility of the sash permits window cleaning from inside of the room with ease and absolute safety.

OUTSTANDING FEATURES:

Ideal Overhead Ventilation
Reversibility for Inside Cleaning
Greater Light Area
More Weathertight Construction
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Simplified Frame Construction
Weightless Windows

Williams Reversible Window Equipment is installed only by factory trained mechanics, assuring efficient workmanship and proper operation of equipment.

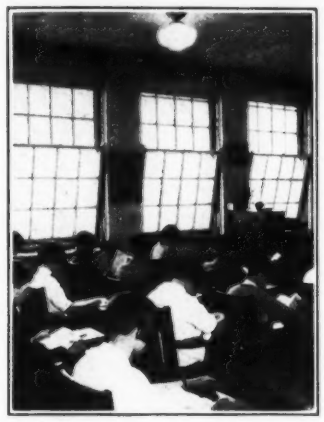
South Western Junior High School, Battle Creek, Michigan. *John D. Chubb, Architect, Chicago, Ill.*

"Williams" Installation Will Provide Reversibility and Sliding Features

Williams Double Hung Reversible Window Equipment will be installed in the South Western Junior High School, Battle Creek, Mich. The sliding feature of the ordinary double hung window is provided, plus complete reversibility. Again, in this installation, the adaptability, service and national acceptance of Williams Reversible Window Fixtures is typified. The demand for a schoolhouse window that will lend itself to good appearance, that is reversible for cleaning and that is conservative in cost, is satisfied by "Williams."

Let us send you further particulars and list of installations near you.

The Williams Pivot Sash Company
E. 37th St. and Perkins Ave. Cleveland, Ohio.



Provides ideal over head ventilation facilities by merely tilting either or both sash.

NEW RULES & REGULATIONS

RULES AND REGULATIONS FOR JANITORS AND ENGINEERS

Evansville Adopts Complete Code

The board of education of Evansville, Ind., has recently adopted a complete code of rules and regulations governing the duties and responsibilities of the engineering and janitorial force. The rules were developed by Mr. M. S. Spears, business manager of the board of education, and are enclosed for guidance not only of the janitors and engineers, but also of the principals and teachers.

The rules were accompanied by the following letter to the principal.

TO THE PRINCIPAL

The principal of each school is the board's responsible executive officer for all activities taking place at the building, and for the building itself. It is, therefore, his responsibility to see that the janitor is informed of, and complies with, the instructions outlined in this manual. In other words, if it is necessary, the principal shall interpret each clause and explain it to the janitorial-engineering employees in his building. The principal should see that his employees are thoroughly familiar with "Rules and Regulations;" then there can be no excuse for unsatisfactory cleaning, heating, and ventilating.

Each month the principal should write the business manager a letter covering the following points:

1. General operation of the plant.
2. Comfort of pupil and teachers.
3. Safety of pupil and teachers.
4. Care of school property.
5. Conformity to "Rules and Regulations."

Mr. Spears has outlined the following six marks of a successful janitor-engineer.

1. He likes his work and takes an interest in it. He does not think of his tasks as hard and disagreeable, but gets real satisfaction out of having well ventilated rooms, uniform heat, and clean floors. He realizes that he is an important cog in the educational machinery, and secures real joy in seeing his work done to the best interest of his school.

2. He is not a "grouch." He gets along well with principals, pupils, teachers, and parents. He is willing to take suggestions from those in authority, and is eager to learn new methods that will improve the quality of his work. He realizes that his job is to keep the building clean, heated and ventilated, and that undue attention to the work of others will lead to trouble.

3. He is careful in his personal appearance. He shaves daily and looks neat at all times. When doing work that is dirty, he has old clothes to slip on. He cannot hold the respect of his associates when he appears ill kept.

4. He is kind and attentive to the little children, and is ever careful of his conduct. His speech is clean and his character is such that there is no room for criticism.

5. He is constantly trying to learn something new and useful. He takes pride in the fact that he is an authority when it comes to the cleaning and heating problems of his building. He wishes to get ahead and studies good books and literature dealing with janitorial problems. He applies the things learned and observes and experiments until he knows the best way.

6. He does not wait until he is told. He sees what is to be done, and when the task is finished, he hunts something else. He knows there are not enough hours in the day to do all that should be done, and for that reason he strives to make every minute useful.

ARTICLE I: ORGANIZATION

Section 1. Administrative Head. The Business Manager, appointed by the Board of Education, is the Administrative Head of the Evansville Public Schools Janitorial-Engineering Department, and shall have general direction thereof at all times.

Section 2. Organization: The organization of the Janitorial-Engineering service comprises:

1. Superintendent of Buildings and Grounds.
2. Supervisor of Housekeeping.
3. Supervising Engineer.
4. Chief-Janitor-Engineer.
5. Engineers.
6. Firemen.
7. Assistant Janitors and Housekeepers.

Section 3. Supervision: The immediate supervision and direction of all employees in the Janitorial-Engineering service shall be vested in the Superintendent of Buildings and Grounds.

ARTICLE II. THE SUPERINTENDENT OF BUILDINGS AND GROUNDS

Section 1. Direction: The Superintendent of Buildings and Grounds shall be under the direction of the Business Manager and the Board of Education.

Section 2. Duties and Responsibilities: The Superintendent of Buildings and Grounds shall:

(a) Subject to the approval of the Business Manager and the Board of Education, make all appointments and fill all vacancies occurring in the Janitorial-Engineering service.

(b) Supervise, and be responsible for, the cleanliness and orderliness of the grounds, the buildings, and the mechanical and educational equipment belonging to the Evansville Public Schools.

(c) Have full charge of, and be responsible for the condition and care of the grounds and equipment thereon.

(d) Have full charge of, and be responsible for the condition, safety and proper operation of all mechanical equipment belonging to the Evansville Public Schools.

(e) Visit each school at least once a month and thoroughly inspect all parts of the buildings, grounds and mechanical equipment.

(f) Supervise all repairs to buildings, grounds and equipment.

(g) Make regular written reports to the Business Manager.

(h) Perform such other duties as may be assigned to him by the Business Manager or School Board.

ARTICLE III. SUPERVISOR OF HOUSEKEEPING

Section 1. Direction: The Supervisor of Housekeeping shall be under the immediate direction of the Superintendent of Buildings

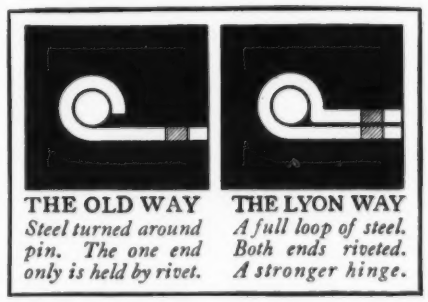
(Continued on Page 94)

You Cannot Spring
these FULL LOOP HINGES
nor
damage the door!

Even the minor parts of Lyon Steel Lockers have superiority designed into them. Lyon hinges are full loops of steel with both ends held by rivets. A double thickness of steel wherever hinges are applied is an added protection. A man can throw his entire weight against the door of a Lyon Steel Locker without springing a hinge.

The Lyon hinge design permits the hinges to act also as a door stop and prevents damage to the finish of adjoining doors. With Lyon hinges, with Lyon doors made rigid by eight flanges of steel, with Lyon doors and frames both electrically welded, a strong man cannot bend nor spring the door so that it will not close perfectly and lock positively and automatically.

On demonstration and test, Lyon Steel Lockers first win their way into some school of a community. Then by performance they win their way into a dominating number of schools subsequently built in that city or section. All over the country, schools are equipped with Lyon Steel Lockers. Many installations have been planned with the help of Lyon Engineers of nation-wide experience. They probably can help you. Write about your requirements and your plans. Any help that can be given is given without cost.



THE OLD WAY *Steel turned around pin. The one end only is held by rivet.*

THE LYON WAY *A full loop of steel. Both ends riveted. A stronger hinge.*

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STEEL LOCKERS

LYON METALLIC MANUFACTURING COMPANY, *Aurora, Illinois*

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Specializing in School and College Buildings in Northern New England
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(Continued from Page 92)

and Grounds and the general direction of the Business Manager.

Section 2. Selection: He shall, subject to the approval of the Board of Education, be selected annually from the Chief-Janitor-Engineers by the Business Manager and the Superintendent of Buildings and Grounds. The selection shall be on a strictly merit basis, and the man selected must have previously demonstrated his ability as a housekeeper in the Evansville Public Schools.

Section 3. Time Spent in Supervision: He shall spend one half of his time in the supervision of the housekeeping work of the various public schools. The other half of his time shall be spent in the performance of his regular Chief-Janitor-Engineer duties in his own school. During his absence from his own school, an assistant shall be in charge.

Section 4. Duties and Responsibilities: The Supervisor of Housekeeping shall:

(a) Inspect the cleaning work of all janitorial-engineering employees to see that all school buildings and equipment are kept clean and sanitary.

(b) Instruct janitorial-engineering employees in the proper manner in which to perform their duties in connection with the housekeeping work of the Evansville Public Schools, and, when necessary shall demonstrate various operations in order to bring the janitorial-engineering service to the highest point of efficiency.

(c) Give special attention to the toilets, lavatories and drinking fountains at the various buildings in order to see that they are at all times kept in a neat and sanitary condition.

(d) Report to the Superintendent of Buildings and Grounds any employee who is not rendering satisfactory service or who is not complying with the rules of the Board of Education, and shall also report any conditions which are not conducive to the best interests of the school system.

(e) After the inspection of a building, file with the Superintendent of Buildings and Grounds, a report which shows the exact condition of that school's janitorial-engineering service. The blanks for such reports shall be the standard form obtained from the school office.

ARTICLE IV. SUPERVISING ENGINEER

Section 1. Direction: The Supervising Engineer shall be under the immediate direction of the Superintendent of Buildings and Grounds and the general direction of the Business Manager.

Section 2. Selection: He shall, subject to the approval of the Board of Education, be selected annually from the Engineers by the Business Manager and the Superintendent of Buildings and Grounds. The selection shall be on a strictly merit basis and the man selected must have previously demonstrated his ability as an Engineer in the Evansville Public Schools.

Section 3. Time Spent in Supervision: He shall spend one half of his time in supervising the firing and operation of the various heating and mechanical plants of the various public schools. The other half of his time shall be spent in the performance of his regular engineering duties within his own building. While he is engaged in supervision work, his fireman shall be in charge of his plant.

Section 4. Duties and Rsponsibilities: The Supervising Engineer shall:

(a) Regularly inspect each heating plant and see that all mechanical equipment is in good order.

(b) Instruct the men in charge of each heating plant in such manner as to:

1. Maintain proper temperatures.
2. Operate on as little fuel as possible.
3. Keep mechanical equipment in proper shape.

(c) Report to the Superintendent of Buildings and Grounds any employee who is not operating his mechanical plant in a manner conducive to the best interests of the Evansville Public Schools.

(d) Study the different mechanical plants in order to suggest improvements.

ARTICLE V. CHIEF-JANITOR-ENGINEER

Section 1. Direction: A Chief-Janitor-Engineer is under the immediate direction of the Superintendent of Buildings and Grounds, and the local direction of the Principal of the school building committed to his charge.

Section 2. Selection: He shall be appointed by the Board of Education upon recommendation of the Superintendent of Buildings and Grounds and the Business Manager.

Section 3. Duties and Responsibilities: He shall see that:

(a) His buildings and grounds are at all times maintained in a satisfactory condition for school use and occupancy.

(b) Heating and Mechanical equipment in his building is in the best possible condition.

(c) Assistant Janitors and Housekeepers perform their various duties in an efficient manner.

ARTICLE VI. ASSISTANT JANITORS AND HOUSEKEEPERS

Section 1. Direction: Assistant Janitors and Housekeepers shall be under the immediate direction of the Chief-Janitor-Engineer in charge of the school in which they are employed and the general direction of the Superintendent of Buildings and Grounds.

Section 2. Number: The Business Manager and the Superintendent of Buildings and Grounds shall determine and notify the Board of Education of the number of Assistant Janitors and Housekeepers needed at various times of the year.

Section 3. Selection: Assistant Janitors and Housekeepers are to be selected by the Superintendent of Buildings and Grounds and approved by the Business Manager.

Section 4. Duties: Assistant Janitors and Housekeepers shall perform the housekeeping work of the school in which they are employed and such other duties as may be assigned by the Chief-Janitor-Engineer.

ARTICLE VII. ENGINEERS

Section 1. Direction: An Engineer shall be employed in any school having mechanical equipment which requires the full time services of an engineer, and shall be under the direction of the Superintendent of Buildings and Grounds.

Section 2. Selection: He shall be selected by the Superintendent of Buildings and Grounds and approved by the Business Manager.

Section 3. Duties and Responsibilities: An Engineer shall:

(a) Have full charge and be responsible for the condition, safety and proper operation of the mechanical plant of the school to which he is assigned.

(b) Regularly inspect all machinery, boilers, pumps, engines, motors, dynamos, fans, steam piping and mechanical equipment of all kinds to see that same are in good working condition at all times.

(c) Report to the Superintendent of Buildings and Grounds any needed changes, additions, repairs or alterations in the mechancial equipment.

(d) Make necessary tests of his plant to ascertain the most efficient and economical methods of operation.

(e) Perform such other duties as may be assigned to him by the Superintendent of Buildings and Grounds.

ARTICLE VIII. FIREMEN

Section 1. Direction: A Fireman in under the immediate direction of the Engineer in charge of the plant he is firing, and the general direction of the Superintendent of Buildings and Grounds.

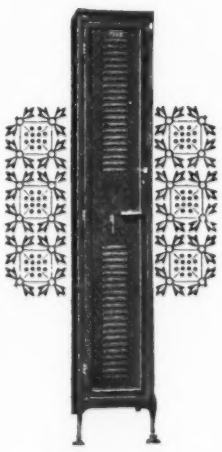
Section 2. Selection: He shall be selected by the Superintendent of Buildings and Grounds and approved by the Business Manager.

Section 3. Duties and Responsibilities: A Fireman must be qualified to perform properly

(Continued on Page 97)

Steel Locker Economy

WISE purchasers select equipment which adds to the beauty and appearance of a school and contributes to its convenience and efficiency ... not only for today but for years to come. When lockers are to be installed, they select the type that is in keeping with the finest fittings and furnishings, presents a neat and pleasing appearance and withstands the rough treatment of heedlessly abusive youngsters. That is economical, sane buying.



Medart Steel Lockers have always been the first choice of school officials because of their superior design, construction and finish. Made of the finest steel. Warp-proof. Baked-on enamel surface furnishes clean attractive appearance. Finished in green or gray with standard louvered doors. Many styles and sizes to meet all requirements. Write for Medart Locker Catalog describing in detail the entire line.

Also Manufacturers of Gymnasium and Playground Equipment. See announcement on page 112

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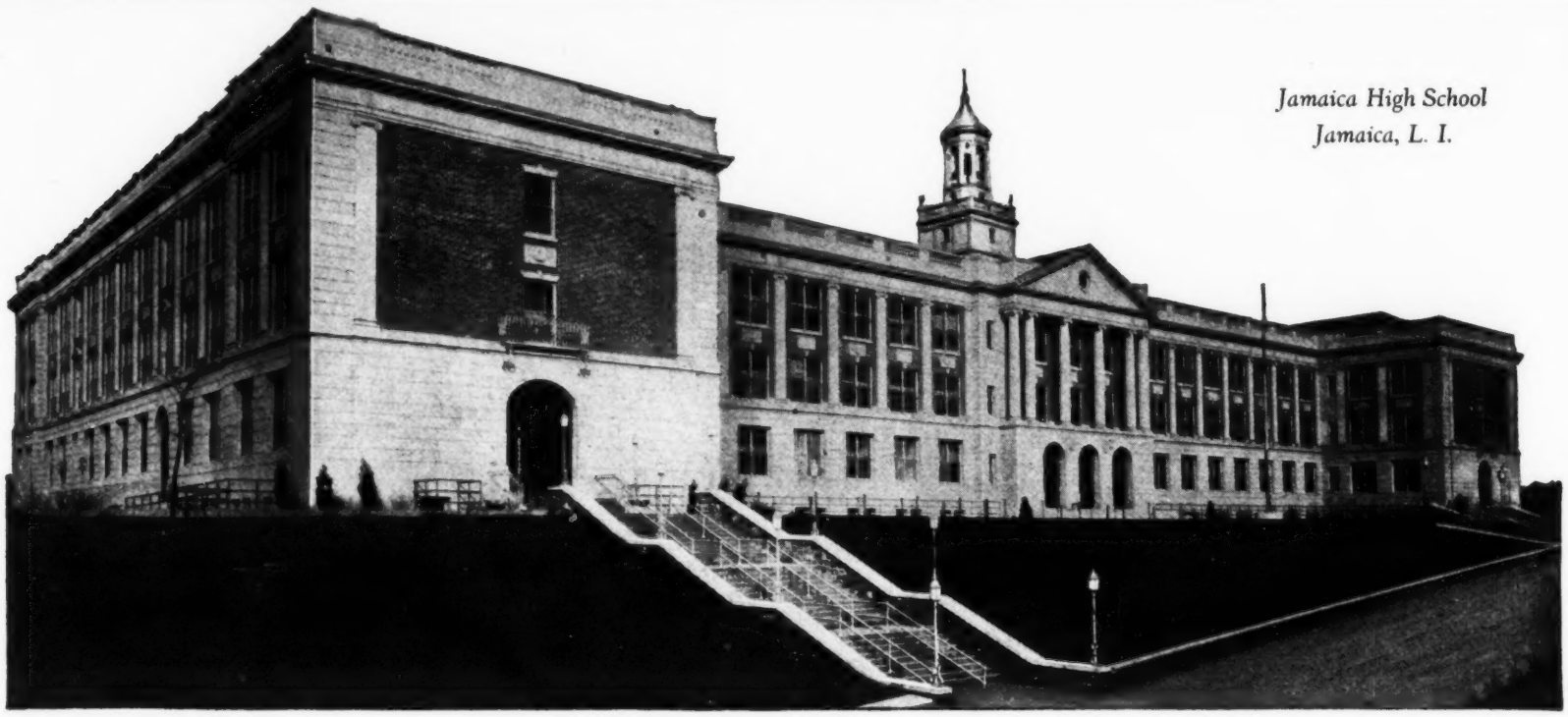


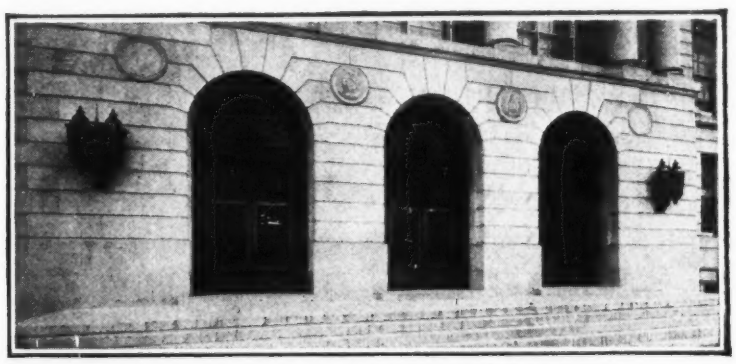
Jamaica High School
Jamaica, L. I.

Keep the Elements Out of Your Budget

When ordinary metal roofing corrodes, rain water leaks into the school building. Far worse than this, it leaks into your budget.

Unless you equip the building with metals that do not rust, replacement charges must become a regular feature of your annual expenditures.

COPPER, BRASS and BRONZE are immune to corrosion. Keep the elements out of your school budget by using these rustproof metals.



Bronze doors and grille work of the new Jamaica High School at Jamaica, Long Island. COPPER roofing gives lasting protection to this building, shown at the top of the page. It was designed by William H. Gompert, Architect, Board of Education, City of New York.

COPPER & BRASS
RESEARCH ASSOCIATION
25 Broadway – New York

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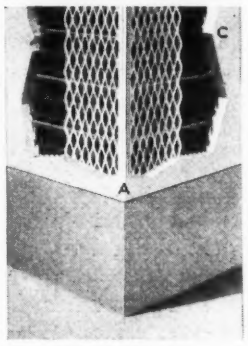
FIRE

...can't lurk in Milcor protected walls



MILCOR

"Expansion" Casings eliminate expensive wooden door-and-window trim. This modern metal product should be built into every school, for economy, better appearance, greater permanence, lower decorating cost, less upkeep expense and for the improved sanitary conditions which are thus assured.

Famous school architects have adapted Milcor "Expansion" Casings and other Milcor products very successfully to schoolroom requirements. We shall be glad to extend to you the benefit of our experience, without cost or obligation.

FIRE finds no hiding place in which to stalk its victims and leap unexpectedly upon its prey, if walls and ceilings are plastered on Milcor Metal Lath and allied products.

Even should Fire succeed in seizing upon the combustible furnishings of a room, it is blocked when it reaches walls protected by Milcor products. Plaster on Milcor Metal Lath, even with wood stud construction confines Fire to the room in which it starts for at least one full hour.

In addition to supreme firesafety, Milcor construction offers greater rigidity and permanent freedom from cracks, streaks, sagging and other dangers that mar appearance and cause expensive repairs.

Before you build a new school or remodel the old one, find out all about the complete line of Milcor metal building products.

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MILCOR
FIRESAFE METAL BUILDING PRODUCTS

MILWAUKEE CORRUGATING CO., Milwaukee, Wis.—Gentlemen:—Please send, without cost or obligation, the data books, as checked here:—
☐ The Milcor Manual on Metal Lath and allied products.
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☐ We are planning a new building.
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Send for these Valuable Books on Safe Construction

The 80-page Milcor Manual contains important technical facts on metal lath construction and Architectural Specifications for firesafe buildings. There are many methods and products described in this Manual, with which you should become familiar before deciding on any construction expenditures. Milcor engineers will be glad to cooperate with your Building Committee, without cost or obligation.

The Milcor Architectural Sheet Metal Guide features Spanish Metal Tile Roofing and other Milcor Products, also essential to safest construction. Use the coupon or write us a letter outlining your plans.

(Continued from Page 94)

the duties of a stoker in the boiler plant of the school in which he is employed and to assist in operation of the mechanical equipment and to perform such other duties as may be assigned to him by the Engineer.

ARTICLE IX. EMPLOYMENT

Section 1. Qualifications: No person shall be eligible for appointment on the janitorial-engineering force of the Evansville Public Schools unless he or she:

(1) Shall be able to read, write and speak the English language.
(2) Shall be clean and neat in appearance.
(3) Shall not be addicted to the use of intoxicating liquors.
(4) Shall be a citizen of the United States and a resident of Evansville.
(5) Shall have sufficient knowledge and experience in the use, operation and care of the mechanical equipment used for the heating, ventilating, lighting, and cleaning of the school building to insure the Board of Education against the damage to school property or health of teachers and pupils.
(6) Shall not be under the age of 21 or over the age of 45 years.
(7) Shall be able-bodied and of good character.

Section 2. Application: All applicants for positions in the janitorial-engineering department must file applications with the Superintendent of Buildings and Grounds, such application to be subject to the approval of the Business Manager.

Section 3. Assignments: Assignments of employees shall be made according to the needs of the respective schools, and employees shall be subject to transfer upon recommendation of the Superintendent of Buildings and Grounds and approval of the Business Manager.

Section 4. Persons Now Employed: If persons now employed in the Evansville Public Schools are giving satisfactory service, the above qualifications shall not strictly apply.

ARTICLE X. HOURS AND ATTENDANCE

Section 1. Opening Hours: The Chief-Janitor-Engineers and other employees regularly engaged in the operation and maintenance of school buildings and grounds shall report for daily duty early enough to have their respective buildings properly conditioned for school.

Section 2. Closing Hour: Janitor-Engineering employees in charge of buildings shall not absent themselves from school premises during school hours without the principal's consent, nor shall they close their buildings before their regular daily duties are completed.

Section 3. Inspection Before Closing: Before closing, the Chief-Janitor-Engineer shall visit each room to see that:

(1) All pupils and teachers are gone.
(2) All lights are out.
(3) All fires are safe.
(4) All windows and openings are closed.
(5) All outside doors are locked.

Section 4. Extra-School Activities: The Chief-Janitor-Engineer shall be in attendance at all regular school activities, and shall receive no compensation for such attendance. He and the necessary assistants shall receive due compensation for all activities not connected with the school. The principal shall decide when there is any doubt as to whether the janitor-engineer employees shall receive pay.

Section 5. Extreme Cold Weather: When the weather is extremely cold, Engineers and Chief-Janitor-Engineers shall spend such extra time as necessary to maintain proper temperatures.

Section 6. Daily Inspection: The Chief-Janitor-Engineer should inspect the building daily (Sundays and Holidays included) to see that everything is in proper order.

Section 7. Saturdays and Holidays: All janitorial-engineering employees shall be entitled to Saturday afternoons and holidays except in emergencies.

ARTICLE XI. TOOLS AND SUPPLIES

Section 1. Standard Tools: The following tools and supplies which are supplied by the Central Office, shall be kept on hand and used as standard equipment:

1. Floor brush.
2. Counter brush.
3. Hopper brush.
4. Sanitary closet brush.
5. Radiator brush.
6. Scrub brush.
7. Broom.
8. Sanitary dustor.
9. Scrubbing mop.
10. Mop bucket.
11. Plumber's friend.
12. Coal bucket.
13. Dust pan.
14. Galvanized iron pail.
15. Wringer pail.
16. Chamois skin.
17. Cleaning cloths.
18. Putty knife.
19. Pliers.
20. Screwdriver.
21. Bamboo basket.
22. Standard cleaner.

Other tools and supplies will be furnished as they are needed.

Section 2. Use and Care of Tools: At specified times, all Chief-Janitor-Engineers will assemble at the Business Office for inspection in the care and use of tools and supplies. The purpose of these lectures is to promote efficiency and economy. The Supervising Housekeeper shall see that the instruction given in these lectures is carried out.

ARTICLE XII. TOOL ROOM OR CABINET

Section 1. Purpose. Each Chief-Janitor-Engineer shall have a room or cabinet which can be locked. The purpose of this room or cabinet is to provide a definite place for the orderly storage of all janitor's tools and supplies.

Section 2. Location: The toolroom or cabinet shall be in such a place to afford the janitor the greatest convenience in the use and storage of his tools and supplies.

Section 3. Loaning Tools. No tools or school property of any description is to be removed from the school premises by anyone without a written permit from the Business Manager.

ARTICLE XIII. PERSONAL APPEARANCE

Section 1. Care of Face, Hands and Hair: Every janitorial-engineer employee should have clean hands and face at all times, should obtain hair cuts at proper intervals, should keep his hair combed, and should shave daily.

A man's outward appearance is a decided asset, and the janitor who takes pride in his personal appearance will find his reward in the prompt reaction of the children in their endeavor to follow the example he sets.

Section 2. Uniforms: Employees must wear the standard uniform prescribed by the Board of Education.

ARTICLE XIV. HEATING AND VENTILATING

Section 1. Control of Heating: The Engineer, or where there is no Engineer, the Chief-

The NATION'S BUILDING STONE

Madden Grade School, Bedford, Indiana
E. E. Dunlap Co., Architects

Stone for the Small Town School

SCHOOL boards planning the erection of new buildings will find it to their advantage to investigate the beauty, outstanding structural merit, good weathering properties, and real economy of our Gray INDIANA LIMESTONE.

The most beautiful educational buildings in America today, ranging from grade schools to college and university buildings, are using the product of this Company's quarries, either for the entire exterior walls, or for trim in connection with walls built of other materials.

Architects as well as those having in charge the erection of new school buildings find our booklet "Indiana Limestone for School and College Buildings" immensely valuable. We shall be glad to send you a copy upon request. Address,

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INDIANA LIMESTONE COMPANY

Janitor-Engineer shall be in charge of and be responsible for heating and ventilating.

Section 2. Minimum and Maximum Temperatures: Rooms shall be brought to the following temperatures one-half hour before school opens sessions and maintained as nearly as possible at these temperatures throughout the day:

(1) Classrooms 68 degrees.
(2) Gymnasiums 55 degrees F.
(3) Showers and Dressing Rooms 72 degrees.
(4) Shops and manual training rooms 65 degrees.
(5) Toilets 55 degrees.

Section 3. Record of Coal Used: The man in charge of heating should keep a careful record of coal used.

ARTICLE XV. CLEANING

Section 1. Sweeping: The Chief-Janitor-Engineer must see that all rooms including corridors, are swept each school day. Sweeping should begin not later than twenty minutes after the afternoon classes are over. Halls may be swept earlier.

Section 2. Dusting: All furniture and woodwork must be dusted daily. Dusting must be completed at least thirty minutes before the opening of school. After sweeping, enough time must be given dust to settle before dusting is begun. Standard dust mops and cloths furnished by the Janitorial-Engineering Department.

Section 3. Mopping: Such rooms as require mopping and scrubbing shall be mopped or scrubbed at such times as the Principal or Supervisor of Housekeeping designate.

Section 4. Cleaning of Woodwork: All woodwork, including desks, chairs, railings, etc., must be kept clean at all times. Whenever the Principal or Supervisor of Housekeeping so designate it, this cleaning shall be done with the cleaning solution provided for that purpose.

Section 5. Toilets: The Chief-Janitor-Engineer must see that all closets and urinals are in repair every day during the school year, and that they are thoroughly cleaned and deodorized daily. The tools and cleaning solution provided by the Janitorial-Engineering Department shall be used daily in this cleaning process. The sprays must be kept running while urinals are in use. Whenever it is possible, the urinals shall be hosed down three or four times a day. Closet seats must be inspected several times a day and thoroughly washed when necessary. Careful daily inspection of the walls of the toilets must be made and writing found thereon removed. Bowls and urinals must not be allowed to become stained, but must be kept in a white and sanitary condition.

Section 6. Basement Condition: The employees of the Janitorial-Engineering Department must see that the basement is kept clean, wholesome and orderly at all times. Accumulation of material, refuse or waste of any kind will not be tolerated. Any accumulation of old desks, books, junk, or old equipment should be reported to the Business Office at once.

Section 7. Window Cleaning: The Chief-Janitor-Engineer shall see that the windows are kept clean at all times. Broken glass shall be reported to the Superintendent of Buildings and Grounds at once.

Section 8. Towels, Toilet Paper and Soap: These supplies shall be obtained by the Principal through requisitions to the Business Office.

Section 9. Stairs and Attics: These places must be kept clean at all times, and no material is to be stored on or under the stairs.

Section 10. Playgrounds, Sidewalks and Lawns: Playgrounds must be kept clear of paper and other refuse, and sidewalks swept regularly. Lawns must be kept trimmed and watered. Snow and ice must be removed from the sidewalks before school hours.

Section 11. Electric Lamps and Fixtures: All electric lamps, shades, fixtures and other glasswork must be kept clean and free from dust.

Section 12. Window Shades: Window shades shall be kept in repair and free from dust. Any evidence of carelessness in the handling of shades shall be reported to the Principal at once.

Section 13. Inkwells: Inkwells shall be cleaned out whenever necessary. They shall be filled upon the Principal's order.

Section 14. Blackboards: Blackboards shall be washed at least once each week.

Section 15. Lavatories and Drinking Fountains: Lavatories and drinking fountains must be kept clean and sanitary at all times.

Section 16. Methods of Cleaning: All Janitorial-Engineering employees engaged in the work of cleaning shall receive instruction at such times as the Business Office deems necessary. This instruction has for its purpose, the teaching of efficiency and economy. This instruction will be given for the most part through lectures. Chief-Janitor-Engineers will be required to attend such lectures and to impart the instructions to all employees under them.

ARTICLE XVI. GENERAL DUTIES

Section 1. Errands: Janitorial-Engineering employees shall run errands only upon the order of the Principal. The Principal should not send an employee off the school property except in the case of an emergency when no one else can be entrusted with the errand.

Section 2. Clocks: Each day that school is in session the Chief-Janitor-Engineer should call the Business Office and get the school time. His clocks should be regulated accordingly.

Section 3. Economy in the Use of Supplies: Janitorial Engineering employees shall see that lights are burned only when necessary. All supplies should be carefully used, and any unnecessary waste reported to the Principal.

Section 4. Inspection of Out-of-the-Way-Places: Roofs, attics, tunnels, gutters, fire escapes, etc., should be inspected the first week of every month.

Section 5. Exhaustion of Coal Supply: The Engineer or Chief-Janitor-Engineer shall notify the Superintendent of Buildings and Grounds whenever the supply of coal begins to run low.

Section 6. Minor Repairs: Changing of seats and minor repairs shall be taken care of according to the wishes of the Principal. The Chief-Janitor-Engineer should make small repairs whenever he sees that they are needed and should not call on the Department of Buildings and Grounds unless necessary.

(Concluded on Page 100)

Safeguarding Health

FLOORS that bear the brunt of hundreds of scraping feet—walls that are touched by many hands—are bound to be the rule in school buildings.

Your children's health demands that such floors and walls offer inherent qualities of cleanliness . . . they must be practically germproof.

Marble meets fully every requirement of school building sanitation. It is impervious to moisture, does not readily collect dust and is easily kept clean . . . when it *looks* clean, it *is* clean. Its wearing qualities and low cost of maintenance, too, make marble the most economical of all materials for interior finish.

Write Department B-10 for a copy of a folder telling more about the use of marble in schools.

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STEEL LOCKERS

Sturdily Made—New "Built-in" Features

STEEL LOCKERS—designed to give the maximum of service, because they are made of strong FLEXIBLE metal. Like a blade of fine Toledo steel, they embody supple strength with good appearance.

ALL-STEEL-EQUIP COMPANY Lockers satisfy engineers and users alike because they are particularly constructed with each detail carefully designed and supervised to attain the final perfect result. The many new "Built-In" features of these steel lockers mark their superiority over the average steel product. You will find ALL-STEEL-EQUIP COMPANY LOCKERS in the large schools of Kansas City, Los Angeles, New York, and Chicago.

Notice Our New "Built-In" Hinge

An integral part of the locker itself, a self-enclosed hinge with the pins inside the locker. It's as near "thief-proof" as possible in locker construction. A "free-swinging" sturdy steel hinge allows the door to swing almost back, not enough to strike the adjoining locker, but sufficiently far to keep aisles clear. This hinge is flush frame type. It "fits" the frame without catchy rough edges. The little canopy over the pin head permits easy cleaning, and adds to the compact attractive appearance of the locker itself. Notice the absence of unsightly rivet heads.

All-Steel-Equip Company

200 JOHN STREET — Main Office and Factory — AURORA, ILL.

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NEW YORK—423 W. 39th St.
PHILADELPHIA—134 N. 4th St.
CHICAGO—35 S. DesPlaines St.
CLEVELAND—816 Huron Road.
KANSAS CITY—403 Hall Bldg.
LOS ANGELES—800 N. Spring St.
MILWAUKEE—610 Sycamore St.
DETROIT—231 Iron St.
TOLEDO—1825 Vermont Ave.

(Concluded from Page 98)

Section 7. Combustibles: Combustibles of any nature should be kept in metal containers and rubbish and waste should not be allowed to accumulate. Slack piles should be watched carefully for fires.

Section 8. Authority Over Pupils: No Janitorial-Engineering employee shall exercise any authority over pupils unless given permission by the Principal.

Section 9. Old Equipment: It will be necessary for the Chief-Janitor-Engineer to account for all worn out equipment. All supplies used must be accounted for.

Section 10. Water, Electricity, and Fuel: The main water supply and the main electric switch should be turned off daily before the Chief-Janitor-Engineer leaves the building.

All employees should see that strict economy is practiced in the use of water, light, and fuel.

ARTICLE XVII. SUMMER CLEANING

Section 1. Responsibility: The Chief-Janitor-Engineer or other employees designated, shall, during the summer months, between the close of school in June and the opening of school in September, give the school building and equipment a thorough cleaning. The summer vacation affords the greatest amount of time for this work, and each plant should be put in first class condition.

Section 2. Duties: (a) Get rid of all rubbish and unclaimed articles.

(b) See that all keys are tagged and turned in to the principal.

(c) Remove all pictures, dust all walls, shades, etc.

(d) Wash all woodwork and furniture in such manner as is designated by Supervisor of Housekeeping.

(e) Sweep building from top to bottom and oil or scrub all floors.

(f) Clean all toilet bowls, urinals washbowls, sinks and drinking fountains.

(g) Clean the boiler, engine and fan rooms and the equipment in them.

(h) Clean all lamps and shades.

(i) Polish all bright parts of machinery and all metal surfaces.

(j) Varnish desks if necessary.

(k) Whitewash where necessary.

(l) Paint where necessary (especially toilet rooms).

(m) Do all minor repair jobs. Material will be furnished by Business Office.

(n) Wash all windows.

(o) Clean inkwells.

ARTICLE XVIII. SALARIES

Section 1. Basis: All Janitorial-Engineering employees shall be employed on a monthly basis but shall be paid semi-monthly.

Section 2. Amount: The Board of Education shall fix the salary schedule for all employees.

Section 3. Extra Work: Whenever a building is used by any organization not intimately connected with the school, a regular janitor-employee must be in charge. He shall be paid extra for such duty.

ARTICLE XIX. REPAIRS AND ALTERATIONS

Section 1. Personal Tools Required: Each Chief-Janitor-Engineer shall supply himself, at his own expense, with the following tools:

One hammer.
One 12" monkey wrench.
One 14" pipe wrench.
One set packing tools.
One pair pliers.
One rule.
One file.
One screw driver.
One cold chisel.

Section 2. Repair Work: The Chief-Janitor-Engineer shall make such repairs as he is able. The maintenance department should not be called to do the work that building employees can do themselves.

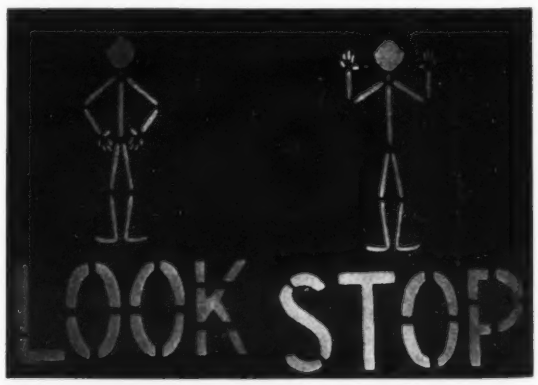
Section 3. Repair Work Requiring Extra Expense: Whenever the Chief-Janitor-Engineer needs materials for repairs he should notify the Superintendent of Buildings and Grounds.

ARTICLE XX. BULLETINS

Section 1. Nature and Purpose: From time to time, the Business Office will mail bulletins to the various principals. These bulletins will deal with janitorial-engineering problems and should be read to the janitorial-engineering employees by the principal and then delivered to the employees. The executive officers of the Janitorial-Engineering force shall see that employees are governed by the bulletins.

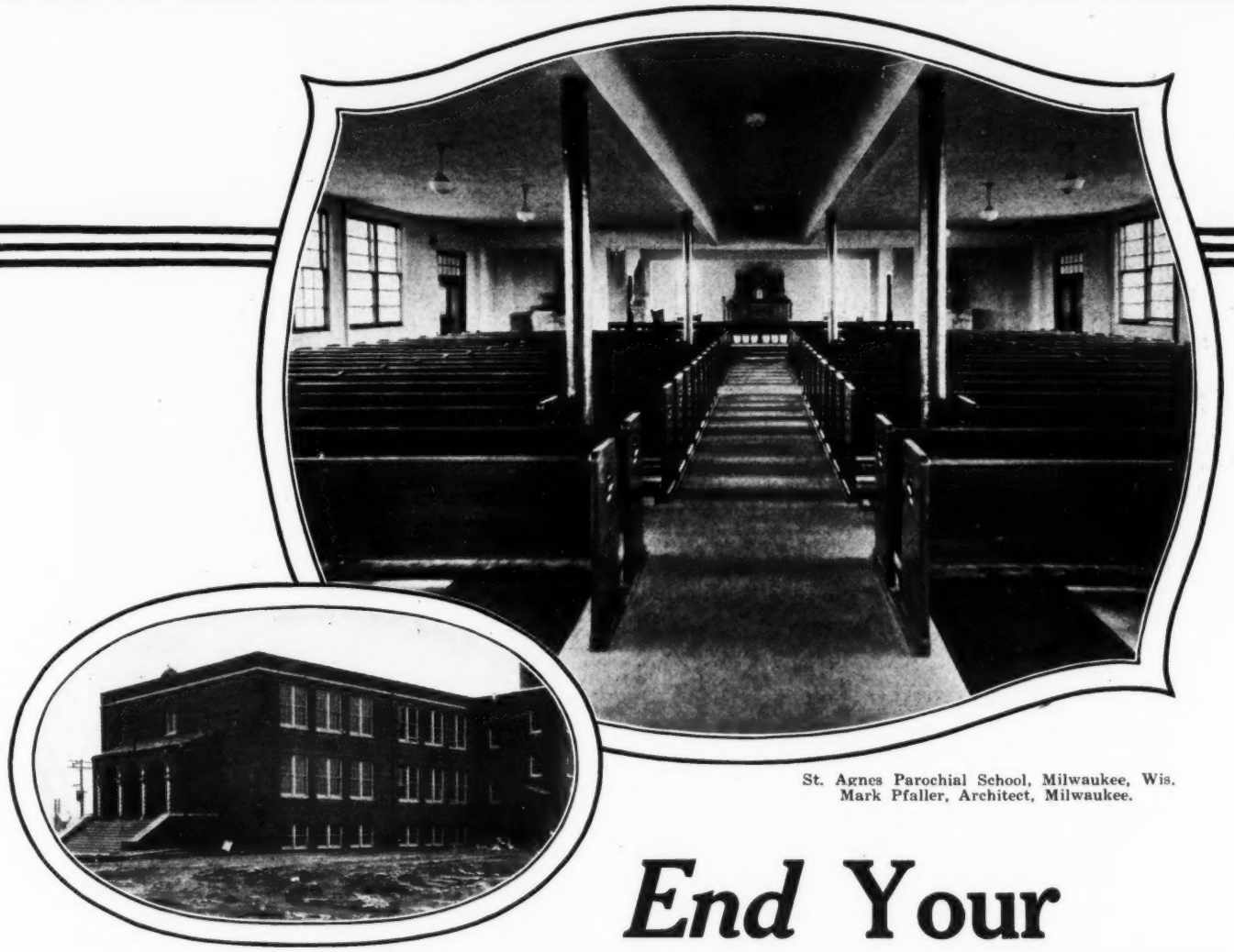
City Adopts Boy's Simple Drawing as a Safety Measure

A schoolboy's drawing has been adopted by the street department in the city of Springfield, Mass., to warn school pupils not to take any risks when they are crossing busy streets. These figures are very simple to draw for "Watchful Slim" has a mere wisp of a body,



but they appeal to the school children and they obey his warning to "Stop, Look, Listen" before venturing across the street. The boy who devised this simple but effective sign, Herman Richter, was rewarded for his good work by being presented a big league baseball outfit consisting of a ball, bat and glove. The "Watchful Slim" figures are stenciled on the sidewalks and pavements near the schools.

—Providence, R. I. The rules governing the salaries of janitors have been amended to provide that a janitor or other employee may be absent for three days without loss of pay in case of the death of a father, mother, brother, sister, husband, wife, or child, or such other relative with whom the janitor or employee may be living.



St. Agnes Parochial School, Milwaukee, Wis.
Mark Pfaller, Architect, Milwaukee.

End Your "school-floor" problem

SCHOOL floors know what wear is. No wonder so many "wear out."

Here is the flooring which is putting an end to the "school-floor" problem — Asbestone. It is ideal from every standpoint — looks, comfort, hygiene, upkeep, cost.

Asbestone will last as long as the building. It is resilient—and easy to the tread—highly fire resistant; dustless—easy to keep clean.

Asbestone Magnesia flooring is installed in plastic form or in tiles over old or new wood or concrete underfloors.

The cost is very low, and there's no upkeep.
You have a floor that stays new.
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Keeping the School Board Informed

I. T. Simley, Superintendent City Schools, South St. Paul, Minn.

"Sworn in and cursed out" is, according to saying, the lot of the average school-board member. Under the circumstances, the interim ought to be made maximally pleasant and profitable both to the members of the board and to those whom they serve. If this condition is to be realized, it is necessary, first of all, that the board be informed; that they be supplied with information with reference to practically everything that pertains to the system of which they have the responsibility and charge. They can't direct, advise, and legislate unless they have as a basis the necessary facts and data pertinent to the problem in hand. The superintendent, as the executive agent or officer of the board, is the logical person to supply this information. Nor has the superintendent discharged his duty when he has supplied whatever information the board may request of its own accord. On the contrary, he should anticipate the needs of his board in this particular and act accordingly. Ordinarily the superintendent knows—at least he ought to know—more about what the board needs to know than the members do themselves.

Though much information can and should be supplied orally, it has been the writer's experience through a period of six years of following the practice, that a written monthly report, a copy of which is sent to each board member from two to four days in advance of any board meeting, has proved an excellent device for keeping the board informed and for bringing about that harmony and cooperation that ought to characterize the relationship between superintendent and board and thus enable them to do their job of running the schools. In addition to its educational value, such a report, being mailed so as to reach board members in advance of the meeting, gives the members an opportunity to think and talk over proposed recommendations in advance, instead of disposing of them on the spur of the moment; it facilitates board-meeting business; finally, it gives them a written record of school activities and affairs, as well as their notes on board action.

The chief characteristics of the monthly report which the writer has used with success are:

1. It is typewritten.
2. It is not longer than necessary.
3. Each subject discussed has a brief topical heading.
4. The content is timely and consists of (a) information, (b) recommendations and suggestions, (c) a statement of bills to be allowed in triple-column form indicating payee, purpose, and amount.
5. A copy is mailed to each board member a few days in advance of the meeting for which the report has been prepared.

It may be appropriate to write briefly of the manner in which the content for a report is decided upon. The most satisfactory method in the writer's experience has been to keep in his files a folder into which are placed from time to time notes and data that seem worthy of incorporation into the report. When the time comes for the making of the report, the month's accumulation of material is gone over, sorted, and weighed as to value, and such parts of it are used as seem worthy. The topics having thus been selected, the superintendent will dictate or write what he wishes to say and his stenographer will do the rest.

By way of illustration as to form and content, one of the writer's actual reports is herewith reproduced.

TO THE HONORABLE BOARD OF EDUCATION
SPECIAL SCHOOL DISTRICT NO. 1,
SOUTH ST. PAUL, MINN.

I am pleased to hand you herewith the following report preparatory to your meeting Wednesday evening, October 13, 1926.

I. T. SIMLEY, Superintendent.

School Gardens Win State Fair Premiums

I am happy to announce the winning of premium money by our school garden clubs as indicated below. The money has been turned over to our clerk.

Roosevelt Garden Club	$ 21.95
Central Garden Club	20.30
Wilson Garden Club	19.85
Home Garden Club	19.40
Junior-High Garden Club	18.50
Total	$100.00

There were many individual entries from among our boys and girls, in flowers, vegetables, and home-beautification projects. Many prizes were won.

Receipts Sent to Our Clerk

Since September 1st, the following sums of money have been received by my office and sent to Mr. Stevenson, our clerk:

9/17/26—Cans and gas used by Canning Club	$ 26.81
10/ 7/26—Premium money—Garden Club	100.00
10/ 8/26—Violin and Piano Books	55.55
Total	$182.36

Special Help Rooms

All preliminary arrangements have now been made so that on Monday, October 11, our special help department was organized with maximum full enrollment. We have moved one department to the Roosevelt building with Miss Penrod in charge. The other department was left in Central with Miss Ritchie in charge. Each department has now an enrollment of fifteen (15) which is the maximum allowed by the state for the $100 per capita aid.

A Suggested Program for Our School Doctor

After a careful analysis of our needs, and after careful consideration of tentative plans, first with the nurse, then with members of our board including the president, and finally with Dr. Lowe, I am proposing for your official consideration and disposition, the following program for our school doctor. Each doctor in the city was given a copy on October 5 with an invitation to offer suggestions.

The school doctor's program for South St. Paul shall be subject always to the following provisos:

a. State law provision regarding nonexaminations.
b. Absolute and meticulously careful recognition of the right of parents to have own family physician.

I. Formal Medical Examinations.
  1. First examination including examination of heart and lungs.
     a. Every beginner in system (estimated 250).
     b. Every new pupil in system (estimated 200).
     c. Every former pupil not previously examined.
  2. Reexamination of:
     a. Pupils recommended for reexamination by nurse.
     b. Followup cases as indicated by doctor himself.
  3. Annual examination of all athletes.
  4. Examination of "special help" pupils.

II. Incidental examinations:
  1. Pupils hurt on school grounds.
  2. Pupils suspected of contagious disease.

III. Treatment—(Optional and subject in every instance, except in unavoidable emergency cases, to parents' and patient's wishes with reference to family physician.)
  1. Prescriptions.
     a. For common skin diseases.
     b. Home remedies.
     c. Malnutrition.
  2. First Aid.
     a. Set broken bones.
     b. Treat minor wounds.

IV. Issuance of attendance permits except those coming under jurisdiction of Health Officer.

V. Occasional inspections of each school building.
  1. Check sanitary and hygienic conditions.
  2. Group inspections of children in their rooms.

The Diphtheria Situation

Cases of diphtheria in two families of the Roosevelt School developed last week. At this writing there have been two deaths. Both families were discovered by our Miss Bryce who should be commended for good work. The children from these families were immediately excluded, and all the remaining children cultured by Dr. Lowe and the two nurses. Very fortunately every culture was reported back negative. It would seem, therefore, to have been caught in time and to have been put under control.

Outside Steps to Central

Mr. Page and his home-mechanics boys have undertaken the building of concrete outside steps to Central. The old iron approaches had worn smooth and thus became risky. The rebuilding furnished an excellent project in concrete for our boys.

Further Reports on Our Boilers

Wilson: Mr. Palmer has raised the water glass. No expense. I haven't been able to get any one as yet to change the safety valves.

Lincoln: Mr. Hanson has done his own repairs. We had a suitable valve. Materials cost $1.45.

High: I am getting a second bid on covering boilers. This, of course, is not an order but a recommendation which it seems we ought to act on. Mr. Pagenkopf and Mr. Ostlund will do the work.

Central: Mr. Grayson and Mr. Bowers have done all the work in Central. The bill for materials has not as yet reached us.

Roosevelt: The water columns have not as yet been raised.

Hot Water for the Washington School

Mr. Heselton has filed a request for hot-water facilities for the Washington school.

Principalship in Washington

Thus far Miss Lillian Blair has served as teacher chairman in the absence of a principal. Would you be willing to give her the principalship for the year? The additional pay, I believe, would be $100.00.

Petitions From Pastors for Excusing Children for Religious Instruction

A petition has been filed with me for presentation to the board asking for the release of certain children from grades four, five, and six for the purpose of receiving religious instruction in certain churches in the city for the period following recess on Wednesday forenoon of each week. It is understood, of course, that only those children will be excused for whom the prescribed arrangements shall have been maue. The children remaining in school will be given substitute work. The pastors petitioning are Burdette L. Main, for First M. E. Church; W. F. Finch for First Presbyterian Church; Wallace Sterns for Clark Memorial Church; David J. Laurence for Bethesda Lutheran Church; Robt. C. Ackerman for St. Paulus Lutheran Church; Arthur W. Koehler for Grace Lutheran Church.

A Request for Your Opinion

On August 26 one of our teachers wrote me and asked for a "leave of absence" for two weeks, explaining that her doctor had advised this extension of her vacation. I made arrangements for the necessary substitute and so notified her. In certifying the pay roll to our clerk, I made a deduction of the two weeks' salary. She intimated to me that she had expected her absence to apply on her sick leave. I, on the other hand, without doing much thinking about it in advance, had looked upon her absence as a special leave since she had not as yet arrived to assume her teaching position. If I am wrong, I wish to make the proper correction.

Electric Wires on Central Grounds

During windy weather particularly the electric wires running through the trees along the west side of the Central school grounds cross and cause trouble. I believe this matter has previously been discussed by the board. Something definite ought to be done.

Parent Presents Claim

By special request I am calling to the board's attention a claim for doctor's services for a child of C. J. Kiel, 1031 Dwane, who was hurt last year on the Lincoln playgrounds. The school regrets the accident, but, according to Miss Gerlach, it certainly was not due to any negligence on the part of the school.

Shall We Continue Selling Pens?

Pens may be sold wholesale two for a penny. They usually retail five or six for a nickel. Shall we supply them? Shall we sell them? Or shall we have the children buy them where they wish? In the past I understand the schools have sold them.

The Wilson Situation

Our Wilson school is not organized on an efficient basis. With our present help, we could easily care for double our enrollment. The situation, however, is not easily remedied. I shall be glad to lay before you various plans and suggestions. If we decide to continue under our present organization, we shall have to do some readjusting in order to care for cooking for the upper-grade girls. In view of our paying Miss Wisniewski's fare from another building to Wilson, would it not be equally fair to pay Mr. Page's and Miss Larson's?

Night School

I have ready for your disposition the formal application for night school to the State Department of Education.

About Fuel

Our fuel contracts should be formally disposed of. The committee selected Elkhorn screenings for our high-school buildings to be furnished by the Empire Fuel Company at $6.95 a ton. To be furnished by I. A. Grant & Co. are Pocahontas screenings at $7.15 a ton for our Roosevelt, and Pocahontas mine run at $8.32 for the Wilson, Lincoln, Central, and Washington.

Quincy A. Hall will test each car for $8.50 which is $5.00 for the test and $3.50 for collecting the samples.

(Concluded on Page 104)

AMERICANIZATION SCHOOL VISITORS.

Seven hundred members of the Americanization Schools of the State of Connecticut recently visited the White House. In the center of the group (right to left): Robert C. Deming, President Coolidge, and John J. Tigert, Commissioner of Education. Mr. Deming is Director of the Americanization Committee of Conecticut.

There's a Durabilt Locker For Every Requirement

FOR the modern educational building where there is a need of locker equipment — whether it be the Grammar School, High School, College or University—there is a type of Durabilt Steel Locker to meet every requirement.

In the accompanying illustrations of the New Senior High School at Eau Claire, Wisconsin, will be found applications of uses of a few of the numerous styles of Durabilt Steel Lockers.

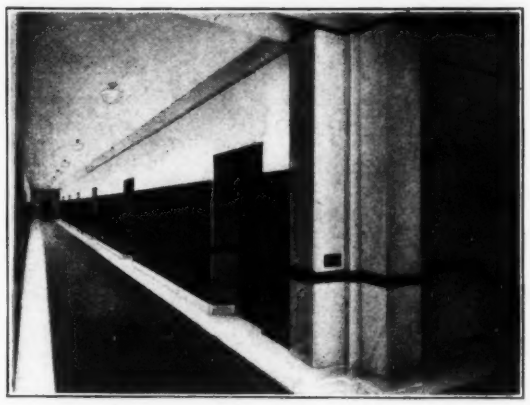
Note the neat and pleasing effect produced by the long rows of recessed lockers built in the walls of the spacious corridors.

In the team rooms, large lockers—free standing on legs—provide ample space for the safe and convenient storage of all clothing.

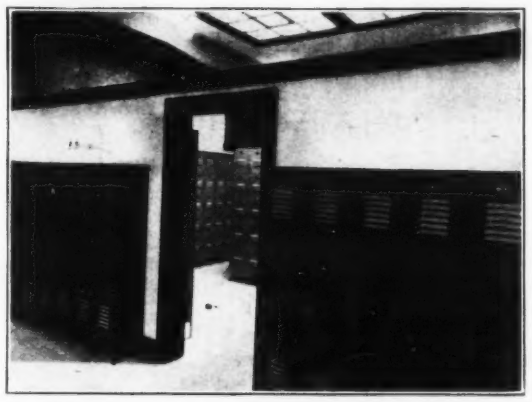
The box lockers illustrated are not only adapted to efficient storage of gym suits, but can also be used in classrooms for books; in manual training departments for tools, aprons, and other items; in sewing rooms and numerous other places where the storage of small articles is necessary.

Durabilt Steel Lockers when installed in Intermediate Schools provide the same advantages of economy, long life and satisfactory service that make them the choice of discriminating buyers for the leading Junior and Senior High Schools of our Country.

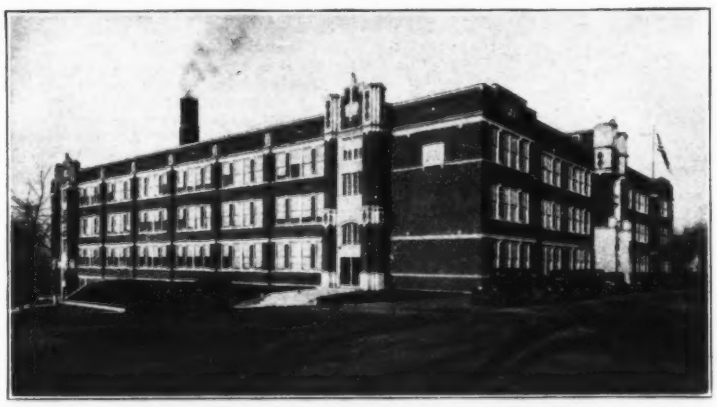
Our Locker Handbook contains most comprehensive information on lockers for all Intermediate and High School purposes. If you have not already received your copy, phone our nearest Sales Office or write us direct at Aurora and it will be forwarded immediately.



Recessed Corridor Lockers



Team Room Lockers



Eau Claire Senior High School, Eau Claire, Wis.

Gym Box Lockers

"No better built than Durabilt!"

DURABILT STEEL LOCKER CO.

400 ARNOLD AVE., Sales Offices In All Principal Cities AURORA, ILL.

WASHABLE

···SO THEY OUTLAST IN WEAR AND BEAUTY

Six new Yonkers schools... Tontine shades exclusively.
Board of Education
Yonkers, N.Y.

THE six new schools built in the City of Yonkers within the last three years have been equipped with Tontine exclusively.

There's no shade like Tontine for school use. A special pyroxylin compound is forced into the very fibre of the fabric. It cannot crack or flake or pinhole, despite rough wear.

And Tontine is washable. Dirt and dust and finger smudges are quickly removed with soap, hot or cold water and a brush.

Tontine is ready for year after year of service . . . the most durable, most economical shade cloth on the market.

Send for samples to test and to show colors suitable for school use.

E. I. DU PONT DE NEMOURS & CO., Inc.
Newburgh, N. Y.
Canadian Distributor: CANADIAN FABRIKOID Limited
New Toronto, Ontario, Canada

DU PONT TONTINE
THE WASHABLE WINDOW SHADE

(Concluded from Page 102)

Who is to mow back the coal when the bins fill up, the dealer or we ourselves?

Use and Abuse of Extra-School Service of Schools

It will be necessary for me to have a definition of policy governing what may be classified under the caption "Use and Abuse of Extra-School Service of the Schools." There is an abundance of both legitimate and illegitimate demand for such service. Already both kinds have come to me. Even legitimate demands must be complied with under some consistent and well-defined plan Will you help me solve the problem? That you may have something with which to start your thinking, I respectfully submit the following suggestions:

Fundamental Principles:

1. The rights and educational interests of our boys and girls shall come first and shall be paramount and shall be consistently safeguarded. Our schools are and shall be maintained especially for them. The fact that they give our teachers and other employees respectable and desirable positions is incidental. The fact that certain business establishments profit through school sales is incidental. Even the fact that it gives our board members opportunities for service and positions of recognition and honor is incidental. Primarily the schools belong to our boys and girls and through them to society.
2. If, incidental to the service rendered our boys and girls, or if, after these interests have been served, there is room for additional and direct service to our community, we should, of course, as the responsible directorate, be happy to extend such service.
3. Whenever school property is used by extra-school organizations or individuals it shall be under the charge of some definitely authorized person, preferably a janitor or member of the faculty, and in accordance with definitely established rules and regulations.

Application:

I. Use of school buildings or rooms outside of school hours.
   1. For boy or girl or school organizations such as boy scouts, girl scouts, parent-teacher associations, etc.
      a. Shall there be any charge for light, heat, janitor service, etc.?
      b. Shall the superintendent use his own discretion in approving the person to be in charge?
   2. For organizations not associated with schools, such as independent basket-ball teams, individuals, societies, etc.
      a. Shall there be any charge for rent (in case of public exhibitions with admission fee), light, heat, janitor service, etc.?
      b. Shall the superintendent or his appointed delegate make arrangements for supervision during such use?

II. Shall school property be allowed to leave the building for loan purposes? A piano, a typewriter, chairs, tables, manual-training tools, etc., are cases in point. (Unless there is something unique about the situation here of which I am not as yet aware, I should urge an absolute ban upon this practice with the exception, probably, of some such case as a janitor borrowing a wrench, a manual-training teacher borrowing a saw, etc.)

III. To what extent shall outside service be rendered by—
   1. Our agricultural department.
   2. Our home-economics department.
   3. Our industrial-training department.
   4. Our printing department.
   5. Our commercial department.
      a. Would it not be safe to dispose of each individual request in terms of its educational value avoiding as far as possible any conflict with local business enterprises?

IV. Shall any solicitation of pupils for funds be allowed?
   1. Argument in favor:
      a. Makes pupil feel he is given a chance to "do his bit."
   2. Arguments against:
      a. In most cases an indirect and usually a second demand upon parent.
      b. An embarrassment for pupil who cannot participate.

V. To what extent, if any, shall we allow ourselves to become an advertising or announcement medium for extra-school activities?
   1. Shall we allow poster advertisements?
      a. Shall an exception be made for church suppers and strictly civic organization affairs?
      b. Shall we make exceptions for strictly educational affairs?
   2. Shall we make or allow oral announcements to be made in assembly and classrooms?
   3. Shall we allow outsiders to make oral announcements?

VI. May we feel free to disregard special weeks and special days as we see fit?
   1. Whatever facts or tendencies calling for special observation either have or will be taken care of in our regular courses of study.
   2. We could keep so busy loading and carrying the propaganda and interests of outside organizations (many of them excellent in their place) that we should have no time left for school work. Nobody who hasn't had the experience can realize what a royal battle school heads have on their hands in clearing the road for their real work.

GEORGE W. HARDIN,
Youngest County Superintendent in Tennessee.

On January 8, 1927, George W. Hardin was elected superintendent of the Greene County, Tennessee, schools. He is twenty-five years of age, was raised at Greeneville, Tenn., where he resides, and is a graduate of Milligan College. Mr. Hardin is not only the youngest school superintendent in Tennessee but is believed to be the youngest in the South. He succeeds Joel N. Pierce, who served in the office for fourteen years but was not a candidate for re-election.

Equipment Program for Our Industrial-Training Department

In accordance with your instructions at an earlier meeting I have gone into the matter of replacing some of our industrial-training equipment with more modern machinery. We have a few old and cumbersome pieces of machinery. I agree with Mr. Wigen that our greatest need is an up-to-date lathe. This is worth from $325 to $350. We have been offered from $30 to $40 for our old one.

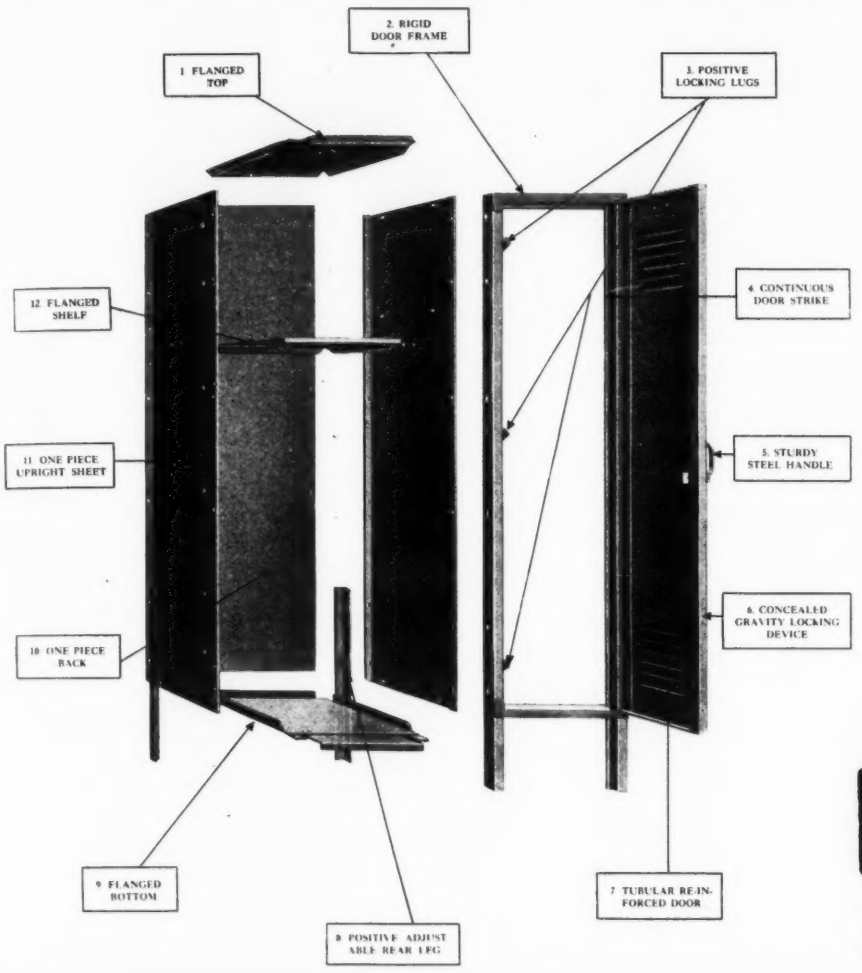
Our High-School Pianos

In our new high-school building we have one piano which is used regularly in the gymnasium by the physical-training department In our old high-school building we have a piano on the third floor which is used daily by Mr. Dreyer in the instrumental music department, and a second piano on the second floor which has served as utility instrument. It is used principally for junior high-school and senior high-school music, enrollment approximately 700, and for Miss Wilson's glee club and chorus work. Whenever a piano has been needed for the assembly room for regular school or evening-school purposes, it has been moved and put to this use. It has also been the piano to be moved down into the gymnasium whenever a piano was needed there. In short, it has had hard usage and shows the effects of it. The company has volunteered to repair it free of charge if we will ship it to them at our expense or to allow us $100 on a trade for a new one. The special school price on the new one is $270.75 f. o. b. Milwaukee.

Bills

A complete, itemized list of the month's bills completes the report.

The "Unseen" Value of Berloy Lockers


2. RIGID DOOR FRAME
1 FLANGED TOP
3. POSITIVE LOCKING LUGS
12. FLANGED SHELF
4. CONTINUOUS DOOR STRIKE
11. ONE PIECE UPRIGHT SHEET
5. STURDY STEEL HANDLE
10. ONE PIECE BACK
6. CONCEALED GRAVITY LOCKING DEVICE
9. FLANGED BOTTOM
8. POSITIVE ADJUSTABLE REAR LEG
7. TUBULAR REINFORCED DOOR

EXPERIENCED eyes will quickly appreciate the wealth of steel locker structural stamina shown in the diagram at the left. Each arrow denotes a detail of experienced workmanship and complete knowledge of steel locker construction.

Back of these distinctive features is the "unseen" value of Berloy Lockers—the engineering thought put into them—the choice of materials of which they are made. The perfect coordination of these structural details is responsible for the exceptional strength and durability of Berloy School Lockers.

The Berloy organization of locker specialists is ready to render a valuable service in assisting school boards and purchasing committees on their locker problems. Write the nearest office.

The Berger Mfg. Co., Canton, O.

New York, Chicago, Boston, Philadelphia, Minneapolis, Jacksonville, San Francisco, Los Angeles, Kansas City, Dallas, Roanoke, St. Louis

BERLOY

BERLOY STEEL LOCKERS

TEACHERS AND ADMINISTRATION

PROPOSED PENSION FOR MARYLAND TEACHERS

—Rockville, Md. The report of the Pension Committee, appointed by the Maryland Teachers' Association, has just been published. The committee chairman is Prof. Edwin W. Broome, superintendent of Montgomery County schools. The report is in the nature of a bill which will be presented to the state legislature for enactment into law.

The plan outlined in the report would require the teachers to contribute a certain percentage of their salaries, according to their ages, when becoming members of the retirement system, the rates varying from 4.28 to 7.75 per cent, and provides for the return of the contribution if a teacher withdraws from service before retirement age.

The contributions payable by the state for benefits allowable after the establishment of the plan is termed by the report "normal contribution" and has been computed to be 2.89 per cent of the teachers' payroll.

Under the proposed plan a teacher may retire at the age of sixty, and retirement at the age of seventy is compulsory. No minimum period of service is required, because the amount of benefit is determined by the length of service. The retirement allowance is computed to be approximately one-half of the average salary during the last ten years of service for the teacher with thirty-five years of service. The plan provides that teachers now in service contribute one half of the cost of the service benefit on account of future service and that the state provide the other half on account of future service.

TEACHERS AND ADMINISTRATION

"Scolding a taxpayer or calling him an enemy butters no teacher's parsnips. Teachers too often forget how heavily their spokesmen penalize them when diatribe is used against taxpayers who ask for facts about teacher pay," says William H. Allen of New York in *Public Service*. "Intolerance and blind following are poor friends to teachers. Any teacher or supervisor who is so badly trained that a citizen's question as to a fact or principle seems hostility is already being paid more than he, or she, is worth. Inability to discuss teacher salaries educatively is a worse menace than any taxpayer prejudice could be. It is not yet treason to question supersalaries for supercredits, to believe it practicable to define and discover and reward superservice, to believe that the same salary is too high as well as too low, to deplore lack of leadership by boards of education and superintendents in adjusting teacher salaries."

—Paducah, Ky. The school board has adopted a plan providing for increases of $40 in the yearly salaries of teachers who have made additional preparation during the year. Under the rule, it is possible for a teacher to add $20 a year to her salary for summer-school attendance, $10 a year for study-center work, and $10 for a Palmer diploma.

—The women-teachers' association of Cambridge, Mass., has made application for a charter, granting them membership in the American Federation of Teachers, affiliated with the American Federation of Labor. The action had its inception in the dissatisfaction of the women teachers with the last wage schedule approved by the school board last June. The state branch of the Association has offered to support the teachers in their efforts to secure a charter.

—The state board of education of Utah has ruled that the high-school apportionment will be withheld in cases where the teachers have not been certified. It appears that violations of the rule have occurred and the board insists on a strict enforcement of the teachers' requirements.

—The Boston school board has adopted a rule requiring that candidates for high-school positions must hold a master's degree, and candidates for junior high schools a college diploma, beginning with January 1, 1929. The rule has been advanced in date in order to avoid embarrassment to deserving teachers preparing for higher certificates, and to prevent unnecessary haste in arriving at the goal of ambition.

—New Haven, Conn. The school board has ruled that appointment of teachers from schools outside the city must be accomplished by means of competitive examination. The change from the selective to the competitive method of appointment places all teachers on the same basis and is believed to be much the better method.

—Boston, Mass. The school board has ruled that the number of candidates admitted to the Teachers' College shall hereafter be limited to 200 annually, 150 to the three-year courses, for which degrees are granted, and 50 to the college courses. The limitation of students has become necessary in view of the fact that a larger number of students has been admitted in recent years than could be placed as teachers. As a result, the city was not able to get the advantage of the education by having the teachers use it for the benefit of the Boston children.

—Cambridge, Mass. The school board has authorized Supt. M. E. Fitzgerald to work out a plan for a teachers' Council, in which every school in the city will be represented.

—The teachers' union of Cambridge, Mass., has decided to affiliate with the American Federation of Labor.

—Teachers in the schools of New Rochelle, N. Y., are allowed full salary for two months on account of absence for personal illness, and half pay for a longer period, not to exceed two months. These allowances are intended to meet all conditions arising from the absence of teachers on account of personal illness.

—Three hundred and thirty-one members of the supervising and teaching staff of the New York City public schools were recommended for sabbatical leaves of absence for the term beginning February first. Included in this total were 66 high-school instructors and 265 teachers in elementary schools.

—The state education department at Raleigh, N. C., has issued a report dealing with the status of the two-teacher rural school. This type of school has been studied in its relation to the preceding year and in relation to the one-teacher school.

The report shows that there were 1,708 white and 338 colored schools of this type in 1915-16. In 1925-26 the number of white schools had decreased to 1,247, or a total decrease of 461. The colored schools had increased to 709 in 1924-25, and in 1925-26 there were only three less. With 1,870 schools within the last five years, there has been a decrease of 623 two-teacher white schools, an average of over a hundred each year.

—Absence of teachers from school on account of sickness as compared with records of industrial workers, and clerical groups, seems to indicate the superior health of teachers, according to a report

10 Reasons why it pays to use Oakite

1 ***It is safe to use*** — Oakite contains no lye, soda ash, caustic, acid or ammonia. Has no injurious action on skin or clothing. There is no fire hazard.

2 ***It is completely soluble*** — Oakite is ALL cleaner. Contains no abrasive, sand, or filler and is completely soluble to the last grain.

3 ***Economical*** — Oakite cleans by the principle of ***emulsification***. Such a small portion of the Oakite is involved in this action that an Oakite solution does much more cleaning than any other material.

4 ***Does not injure equipment*** — Oakite cleans by a ***physical*** instead of a chemical action. Because of this it will not injure fabrics or surfaces to be cleaned.

5 ***Cleans quickly*** — Due to its DIFFERENT and unusual cleaning action, Oakite removes grease and dirt that other materials will hardly affect. And does it FASTER.

6 ***Does thorough work*** — Oakite cleans on an entirely new principle and 18 years experience has conclusively proven that it does its work more effectively and thoroughly than any other material.

7 ***Saves time*** — It actually requires less time to clean floors, walls, wash dishes, or do other cleaning jobs with Oakite.

8 ***Has many different uses*** — This modern detergent can be used for cleaning floors, walls, windows, marble, tile, mosaic, cement, terrazzo, rubber, wood, linoleum, desks, chairs, tables, carpets, rugs; it can be used in the kitchen, in fact, wherever there is cleaning to be done and wherever scrupulous cleanliness is of utmost importance.

9 ***Cleans easier*** — It is a demonstrable fact that any cleaning job can be done with less effort and less labor with Oakite.

10 ***Service*** — Conveniently located in the larger cities of the United States and Canada are Oakite Service Men who have a wide experience in solving cleaning problems. These men are available without cost, to users and prospective users of Oakite materials.

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OAKITE PRODUCTS, INC., 26B Thames St., NEW YORK, N. Y.
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Oakite Service Men, cleaning specialists, are located at:

Albany, Allentown, Pa.; Altoona, Pa.; Atlanta, Ga.; Baltimore, *Birmingham, Ala.; *Boston, Bridgeport, *Brooklyn, Buffalo, Camden, Charlotte, N. C.; *Chicago, *Cincinnati, *Cleveland, *Columbus, Ohio; *Dallas, *Davenport, *Dayton, *Denver, *Des Moines, *Detroit, Erie, Flint, Mich.; Fresno, Calif.; *Grand Rapids, Harrisburg, Hartford, *Indianapolis, *Jacksonville, Fla.; *Kansas City, *Los Angeles, Louisville, Ky.; *Milwaukee, *Minneapolis, *Montreal, Newark, Newburgh, N. Y.; New Haven, *New York, *Oakland, Calif.; *Omaha, Neb.; Philadelphia, *Pittsburgh, Portland, Me.; *Portland, Ore.; Providence, Reading, *Rochester, Rockford, Rock Island, *San Francisco, *Seattle, *St. Louis, South Bend, Ind.; Springfield, Ill.; Syracuse, *Toledo, *Toronto, *Tulsa, Okla.; Utica, Vancouver, B. C.; Williamsport, Pa.; Worcester.

**Stocks of Oakite materials are carried in these cities.*

of a recent study made by James F. Rogers, chief of the division of physical education, to the United States Bureau of Education. The statistics show that the teacher is not more subject to diseases of the respiratory organs than any other indoor workers, nor to diseases of the digestive organs. In regard to nervous diseases, however, and nervous exhaustion, the records are not so favorable. In New York City, neurasthenia is found to increase with age up to 45-54 years.

—Women teachers in Allentown, Pa., schools must remain unmarried or stop teaching, under a new rule of the board of education. The new order does not affect women teachers already married. Disorganization of the teaching staff because of frequent marriages was given as the reason for the rule.

—Madison, Wis. The board of education by a vote of five to one, has rejected a resolution intended to prevent the employment of married women teachers. It was the consensus of opinion that the superintendent should be allowed to nominate the best available teachers, either married or single, for vacancies which may occur.

THE COMPENSATION OF TEACHERS DURING ABSENCE

The special committee of the school board of Racine, Wis., to whom the matter of time allowance for teachers absent on account of illness or death was referred, has recommended that the following ruling be adopted:

"A teacher absent on account of personal illness, or on account of serious illness or death in his or her immediate family, shall be allowed full pay for a total of not more than ten school days, except that for absence on account of death in the immediate family, the allowance shall not extend beyond one day after the funeral. The immediate family is interpreted to mean father, mother, grandfather, grandmother, child, grandchild, brother, sister, husband, or wife.

"In addition to the ten days, a teacher may be allowed half pay for absence due to personal illness for a period of not more than ten days."

The committee made quite an extended study of the subject of teachers' pay during absence. A tabulation of 120 questionaries sent out showed 116 replies from cities ranging in population from 30,000 to 100,000. The following is the result of the inquiry:

Thirty-Eight Cities Allowing 10 Days Full Pay—	Allowance Account of Death in Immediate Family
1. Sacramento, Calif.	Not answered.
2. Muskegon, Mich.	5 days.
3. Jackson, Mich.	Included in sick leave.
4. San Diego, Calif.	Included in sick leave.
5. Lakewood, Ohio	Included in sick leave.
6. Brookline, Mass.	5 days.
7. Stockton, Calif.	Not answered.
8. Pasadena, Calif.	3 days.
9. Fresno, Calif.	3 days.
10. Montgomery, Ala.	1 day after funeral.
11. Bayonne, N. J.	5 days.
12. Galveston, Tex.	3 days.
13. Fond du Lac, Wis.	Included in sick leave.
14. Oklahoma City, Okla.	Included in sick leave.
15. Pontiac, Mich.	Included in sick leave.
16. Evanston, Ill.	5 days out of city and 5 days in.
17. Lansing, Mich.	Included in sick leave.
18. Janesville, Wis.	Included in sick leave.
19. Brocton, Mass.	3 days from sick leave.
20. Pawtucket, R. I.	5 days from sick leave.
21. Lorain, Ohio	3 days.
22. Medford, Mass.	Included in sick leave.
23. Holyoke, Mass.	10 days in one year.
24. Decatur, Ill.	3 days.
25. Malden, Mass.	3 days.
26. Elmira, N. Y.	4 days.
27. Jamestown, N. Y.	Included in sick leave.
28. Hamtramck, Mich.	Included in sick leave.
29. Peoria, Ill.	Included in sick leave.
30. Charleston, S. C.	2 days.
31. Kenosha, Wis.	Included in sick leave.
32. St. Joseph, Mo.	Half pay one week.
33. Gary, Ind.	Included in sick leave.
34. New Britain, Conn.	Included in sick leave.
35. Troy, N. Y.	5 days.
36. Topeka, Kans.	5 days.
37. Cicero, Ill.	3 days.
38. Terre Haute, Ind.	3 days.
Twelve Cities Allowing 5 Days Full Pay—	
1. Wheeling, W. Va.	Included in sick leave.
2. Aurora, Ill.	Included in sick leave.
3. Canton, Ohio	3 days.
4. Wichita, Kans.	Included in sick leave.
5. Bay City, Mich.	1 day in city —2 days out.
6. Muncie, Ind.	3 days.
7. Wichita Falls, Tex.	Full deduction.
8. Manitowoc, Wis.	Included in sick leave.
9. McKeesport, Pa.	Included in sick leave.
10. Beloit, Wis.	Included in sick leave.
11. Pueblo, Colo.	Included in sick leave.
12. Lancaster, Pa.	5 days.
Six Cities Allowing Half Pay Twenty Days—	
1. Cedar Rapids, Iowa.	3 days.
2. Little Rock, Ark.	5 days.
3. Altoona, Pa.	3 days.
4. Passiac, N. J.	5 days.
5. Johnstown, Pa.	3 days.
6. Charleston, W. Va.	Included in sick leave.
Five Cities Allowing Full Pay Less Substitute Salary for 30 days—	
1. Chelsea, Mass.	5 days.
2. Portsmouth, Va.	4 days.
3. Fort Wayne, Ind.	Full pay.
4. Mobile, Ala.	Salary less cost of sub.
5. Jacksonville, Fla.	3 days.
Five Cities Allowing Full Pay Twenty Days.	
1. Highland Park, Mich.	Indefinite.
2. East Orange, N. J.	5 days.
3. New Rochelle, N. Y.	Not answered.
4. Oshkosh, Wis.	Included in sick leave.
5. Sheboygan, Wis.	Included in sick leave.
Four Cities Allowing 15 Days Full Pay—	
1. East St. Louis, Ill.	5 days.
2. Covington, Ky.	3 days.
3. Somerville, Mass.	3 days.
4. Hammond, Ind.	None.
Four Cities Allowing:	
25 per cent deduct 1st 10	days.
50 per cent deduct 2nd 10	days.
75 per cent deduct 3rd 10	days.
1. York, Pa.	Included in sick leave.
2. La Crosse, Wis.	Included in sick leave.
3. Allentown, Pa.	10 days after funeral.
4. Bethlehem, Pa.	Included in sick leave.
Two Cities Allowing Half Pay for 30 Days—	
1. Everett, Mass.	4 days.
2. Chester, Pa.	4 days.
Two Cities Allowing 10 Days Full Pay Succeeding 10 Days, Half Pay—	**Allowance Account of Death in Immediate Family**
1. Davenport, Iowa.	Included in sick leave.
2. Oak Park, Ill.	3 days.
Two Cities Allowing Half Salary for 10 Days—	
1. Beaumont, Tex.	1 day.
2. Springfield, Mo.	Full deduction.
Two Cities Allowing 5 Full and 20 Days Half—	Included in sick leave.
1. Battle Creek, Mich.	5 days full and 5 days half.
2. Sioux City, Iowa.	
Two Cities Allowing 5 Days Full Pay and 15 Days Half Pay—	
1. Long Beach, Calif.	Included in sick leave.
2. Lincoln, Nebr.	5 days full pay and 5 days half pay.
Two Cities Allowing 5 Days Full and Half Pay for Second 5 Days—	
1. Rockford, Ill.	Included in sick leave.
2. Quincy, Mass.	Included in sick leave.
Two Cities Allowing: Full Pay 1st 5 Days, after 5 Days, Salary less Sub. Not to Exceed 5 Mo., less Sub. Salary of $4 per Day.	
1. Joliet, Ill.	Included in sick leave.
2. Wilkes-Barre, Pa.	Not answered.

(Concluded on Page 110)

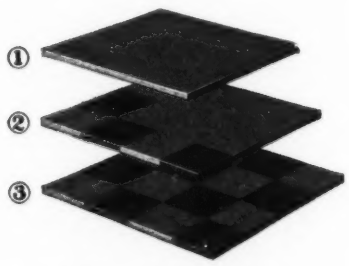
T-M-B Flooring Now Provides New Architectural and Engineering Uses

Insurance Company of North America, Philadelphia, Pa. Stewardson & Page, Archts. Stone & Weber, Engineers. 120,000 feet of T-M-B flooring originally. Repeat order for 20,000 feet, making a total of 140,000 used.

T-M-B Flooring can now be specified for the flooring requirements of each building.

Furnished in thicknesses 1/8", 3/16", 1/4" and 3/4", it can be specified to meet the various conditions of wear experienced in factories, schools, churches, offices, and hospitals.

Applied both in tile and trowelled on form, attractive patterns and designs can be planned as required. For example, church aisles use tile T-M-B; under the pews, trowelled on T-M-B at an average, economical expense—Reception rooms, lobbies, entrances, corridors, are often specified tile T-M-B with general areas, the trowelled on.



1. T-M-B solid color (trowelled on).
2. T-M-B Tile as a border with field trowelled on.
3. T-M-B in tile form.

T-M-B Flooring has a wide range of adaptability and its use solves many problems. How best to specify T-M-B can be obtained by writing the

T-M-B Flooring Points of Preference

A rubbery, velvety texture, comfortable to the foot, and quiet.

Long wearing; never rots.

Less expensive, both initially and to maintain.

Where remodeling, partition spaces can be invisibly joined.

Where damaged, can be invisibly resurfaced.

Where worn, can be invisibly renewed.

Seamless, sanitary and waterproof.

Made in thicknesses to meet requirements of all conditions of wear.

Applied in patterns as well as solid colors.

Installed and guaranteed by a firm whose business experience covers 60 years.

Flooring Division

Thos. Moulding Brick Company

60 years of responsibility.

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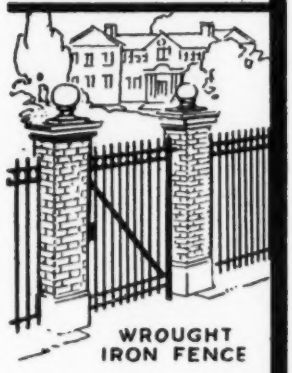
NEW YORK CITY, N. Y.

Moulding T-M-B FLOORING Flooring

SCHOOL



Stewarts
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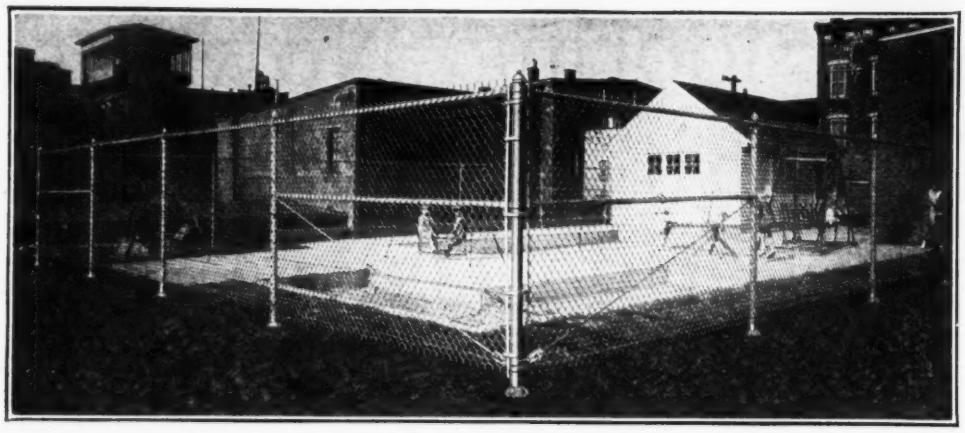
STANDARD OF THE WORLD

PLAYGROUND



Buying for Permanence

SCHOOL fencing is a part of the permanent school plant and is as essentially a matter of buying for permanence as is the purchase of the heating or ventilating equipment. It is not a question of first cost per foot but of cost per foot per year of service.

STEWART-AFCO FENCING—whether of copper-bearing-steel chain link fabric, or of wrought iron—is designed to afford permanent protection. It is right, in design and construction, whatever the style preferred.

Beyond this, however, is the very important matter of proper installation — that sound fence value may not be sacrificed by make-shift erection. Here our staff of fence specialists functions—as consultants or as actual erectors, as the customer prefers.

Let us confer with you on this question of school upkeep economy. Send for your copy of our School Fence catalog—or let out local fence man call—without obligation in either case.

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420 Stewart Block, Cincinnati, Ohio

American Fence Construction Co.
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Agents and Representatives in all Principal Cities

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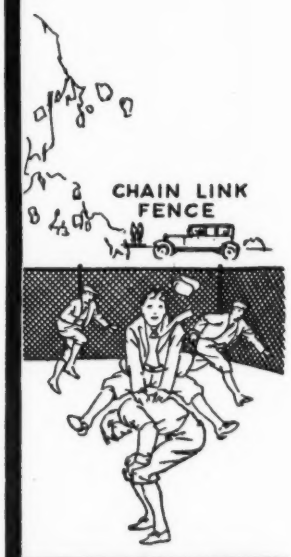
PRODUCT PLUS SERVICE



ENCLOSURES

(Concluded from Page 108)

Two Cities Allowing Full Pay Less Half Cost of Sub. for 10 Days—	Allowance Account of Death in Immediate Family
1. Savannah, Ga.	Included in sick leave.
2. Charlotte, N. C.	Not answered.
Two Cities Allowing 3 Days Full Pay—	
1. East Chicago, Ind.	2 days.
2. New Castle, Pa.	Included in sick leave.
Miscellaneous	
Hoboken, N. J. 30 days full pay.	Not answered.
Waterloo, Iowa Half pay two months.	5 days.
Manchester, N. H. 16 days full pay.	5 days.
Hamilton, Ohio 10 days full pay and 10 days account illness.	2 days.
Lawrence, Mass. 10 days full pay and 50 days half, account illness.	3 days.
El Paso, Texas 9 days full and 9 days half.	Included in sick leave.
Niagara Falls, N. Y. 5 days full pay and 35 days half.	3 days.
Saginaw, Mich. (A district) Full pay less Sub. salary for 30 days.	5 days.
Council Bluffs, Iowa. Full pay 5 days and half pay 10.	Included in sick leave.
Chicopee, Mass. 5 days full, 5 days half, 5 days fourth pay.	3 days.
Superior, Wis. 7 days full, accumulative.	Included in sick leave.
South Bend, Ind. % time for month beginning 6th day of absence.	3 days.
Newton, Mass. Full pay 1 week and ½ two weeks, 1 day add. for each year of service.	5 days.
Winston-Salem, N. C. $2.00 deduct. 1st 10 days, $1.50 2nd 10 days.	Board Action.
Stamford, Conn. Less than 1 month, Supt.'s authorization account of illness.	5 days.
Saginaw, Mich. (B District) Half pay 1 week.	5 days.
Salem, Mass. 5 days full pay; difference between salary and Sub. pay for 5 mo.	5 days.
Two Cities Allowing 3 Days Full Pay—	**Allowance Account of Death in Immediate Family**
Mt. Vernon, N. Y. 15 days full pay, 30 days half pay.	5 days.
Tulsa, Okla. Deduct one half of one per cent from annual salary for each day's absence up to 20 to 40 days.	Included in sick leave.
Lexington, Ky. As to age of service— Minimum 5 days full pay, 15 days less Sub. salary, maximum 10 full pay, 20 days less substitute salary.	Included in sick leave.
Evansville, Ind. Cumulative from year to year according to length of service. Number days yearly allowance not given.	3 days.
Madison, Wis. 10 days full pay and 20 days additional less substitute salary.	5 days.
Springfield, Ohio 40 days less substitute salary.	Not answered.
Harrisburg, Pa. Full pay 20 days, half pay next 20.	5 days.

TEACHERS' SALARIES

SALARIES OF TEACHERS IN CITIES OVER 100,000 POPULATION

—The Research Division of the National Education Assn. has issued a report of the results of a study of salaries paid teachers, principals, and other school employees, for 1926-1927, in 59 cities over 100,000 in population. The report gives the median salary for each of the years represented, the minimum and maximum salary for 1926-1927, the number of increments, the number of persons in each group, and the distribution of salaries paid.

Median Salaries Paid Teachers in Cities Over 100,000 Population, 1926-1927

	Elementary Median Salaries 1926-1927		Junior High School Median Salaries 1926-1927		Senior High School Median Salaries 1926-1927	
Alabama	$1278	$1513	.....	.....	$1724	$1863
Birmingham	$1278	$1513	.....	.....	.....	.....
California	$1922	$2063	$2247	$2529	$2401	$2396
Los Angeles	$1802	$1903	.....	.....	$2322	$2320
Oakland	$2026	$2431	$2246	$2555	$2400	$2811
San Francisco	$1900	$2400	$2247	$2443	$2400	$2800
Colorado	$2024	$2103	$2115	$2185	$2436	$2711
Denver	$2024	$2103	$2115	$2185	$2436	$2711
Connecticut	$1578	$1814	$1763	$2008	$2154	$2263
Bridgeport	$1735	$1743	.....	.....	$2141	$2197
New Haven	$1544	$1822	$1763	$2008	$2175	$2304
Delaware	$1775	$1800	.....	.....	$1950	$1923
Wilmington	$1775	$1800	.....	.....	$1950	$1923
District of Columbia	$2027	.....	.....	$2222	.....	$2805
Washington	$2027	.....	.....	$2222	.....	$2805
Illinois	$2387	$2353	.....	$2067	$3026	$3242
Chicago	$2387	$2353	.....	$2667	$3026	$3242
Indiana	$1930	$1990	.....	.....	$2766	$2800
Indianapolis	$1930	$1990	.....	.....	$2766	$2800
Iowa	$1817	$1824	$2010	$2040	$2221	$2345
Des Moines	$1817	$1824	$2010	$2040	$2221	$2345
Kansas	$1684	$1704	$1905	$1916	$2170	$2238
Kansas City	$1684	$1704	$1905	$1916	$2170	$2238
Kentucky	$1330	$1383	.....	.....	$1845	$1973
Louisville	$1330	$1383	.....	.....	$1845	$1973
Louisiana	$1531	$1701	.....	.....	$2348	$2479
Maryland	.....	$1529	.....	$1697	.....	$2519
Baltimore	.....	$1529	.....	$1697	.....	$2519

(Concluded on Page 112)

THE FUN-FUL LINE
PLAYGROUND EQUIPMENT

FUN-FUL Playground Equipment is the result of experience, a quarter of a century devoted exclusively to the development and manufacture of children's outdoor health building goods by this Company. The best you can buy, this we guarantee.

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Possesses many exclusive features and refinements that are the result of our long experience in the manufacture of Playground and Gymnasium Apparatus. Prices are LOWER than you would expect for apparatus of such high character.
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New York Pittsburgh Philadelphia Cleveland Detroit
Chicago San Francisco Los Angeles
Also Manufacturers of Steel Lockers and Gymnasium Apparatus. See Announcement on Page 95 This Issue.

(Concluded from Page 110)

	Elementary Median Salaries 1926-1927		Junior High School Median Salaries 1926-1927		Senior High School Median Salaries 1926-1927	
Massachusetts	$1769	$1780	$1971	$2023	$2445	$2490
Fall River	$1700	$1700	$1950	$1963	$2263	$2267
Lowell	$1700	$1700	$1938	$1948	$2033	$2225
New Bedford	.....	$1900	.....	$2700	.....	$2900
Springfield	$1800	$1800	$2060	$2100	$2467	$2467
Worcester	$1800	$1814	$1936	$2134	$2623	$2665
Michigan	$1922	$1969	$2600	$2553	$2619	$2593
Detroit	$1960	$2001	$2600	$2553	$2600	$2800
Grand Rapids	$1678	$1837	.....	.....	$2191	$2137
Minnesota	$1720	$1753	$1975	$1968	$2263	$2295
Minneapolis	$1810	$1938	$2000	$2030	$2220	$2215
St. Paul	$1687	$1700	$1856	$1866	$2295	$2300
Missouri	$1877	$1954	$2147	$2188	$2564	$2635
Kansas City	$1767	$1790	$2004	$2095	$2391	$2414
St. Louis	$1936	$2144	$2326	$2443	$2780	$3000
Nebraska	$1883	$2037	.....	.....	$2151	$2244
Omaha	$1883	$2037	.....	.....	$2151	$2244
New Jersey	$1882	$2009	$2227	$2394	$3049	$3161
Camden	$1730	$1800	$1854	$1962	$2133	$2100
Jersey City	$1818	$1913	$2537	$2723	$3127	$3458
Newark	$2271	$2356	$2709	$2904	$3800	3800
Paterson	$1841	$1978	.....	.....	$2450	$2695
Trenton	$1602	$1834	$2098	$2331	$2725	$2883
New York	$2545	$2578	$3220	$3217	$3233	$3201
Buffalo	$2009	$2015	.....	.....	$2400	$2292
New York	$2801	$2802	$3233	$3230	$3700	$3700
Rochester	$1906	$2000	$2233	$2446	$2406	$2435
Syracuse	.....	$1837	.....	$1886	.....	$2163
Yonkers	.....	$2493	.....	$2621	.....	$2940
Ohio	$1895	$2007	$2158	$2213	$2510	$2568
Akron	$1905	$1849	.....	$1683	$2198	$2291
Cincinnati	$2000	$2000	$2263	$2173	$2473	$2638
Cleveland	$1963	$2124	$2212	$2320	$2804	$2938
Dayton	$1807	$1762	$1845	$1947	$2276	$2411
Toledo	$2000	$2000	.....	$2146	$2500	$2500
Oregon	$1759	$2049	.....	.....	$2043	$2243
Portland	$1759	$2049	.....	.....	$2043	$2243
Pennsylvania	$2000	$1780	$2098	$2352	$3222	$3161
Philadelphia	$2000	$1796	$2157	$2423	$3254	$3208
Reading	$1401	$1569	$1629	$1804	$2038	$2271
Scranton	$1689	$1819	$1650	$1771	$2257	$2200
Rhode Island	$1662	$1738	.....	.....	$2224	$2181
Providence	$1662	$1738	.....	.....	$2224	$2181
Tennessee	$1238	$1336	$1318	$1408	$1847	$1800
Nashville	$1238	$1336	$1318	$1408	$1847	$1800
Texas	$1500	$1550	$1558	$1579	$1793	$1871
Dallas	.....	$1649	.....	.....	.....	$2029
Fort Worth	$1500	$1500	.....	.....	$1800	$1800
Houston	$1523	$1785	$1777	$1763	$1815	$2041
San Antonio	$1385	$1384	$1382	$1432	$1720	$1806
Utah	$1463	$1657	$1695	$1773	$1880	$1942
Salt Lake City	$1463	$1657	$1695	$1773	$1880	$1942
Virginia	$1209	$1406	$1625	$1663	$1839	$2000
Norfolk	$1323	$1387	$1518	$1603	$1879	$1994
Richmond	$1134	$1440	$1913	$2003	$1665	$2101
Washington	$1812	$1844	.....	.....	$2177	$2148
Seattle	$1895	$1958	.....	.....	$2251	$2239
Spokane	$1722	$1733	.....	.....	$2074	$2059
Wisconsin	$2401	$2401	.....	$2200	$2600	$2600
Milwaukee	$2401	$2401	.....	$2200	$2600	$2600

TEACHERS' SALARIES IN NEW JERSEY

The total amount of salaries paid day school teachers in New Jersey, including manual-training, vocational, and special summer-school teachers, exclusive of superintendents, assistant superintendents, or evening-school teachers, was $42,848,860, according to a recent report of the state education department.

The total amount of salaries paid day-school year paid to all day-school teachers (23,135), not including superintendents, assistant superintendents or evening-school teachers, was $1,852, an increase over the preceding year of $66.35.

The average salaries paid to teachers in different kinds of schools during 1925-1926 were as follows:

	Men	Increase	Women	Increase
Kindergarten	.....	.....	$1,767.31	$51.99
Grades 1 to 4.....	$1,464.39	$210.91D	1,593.40	47.30
Grades 5 to 8.....	1,803.98	71.73	1,744.70	35.03
Jr. High Schools.	2,146.77	53.82	2,139.11	58.00
High Schools.....	2,694.96	47.51	2,199.94	82.96

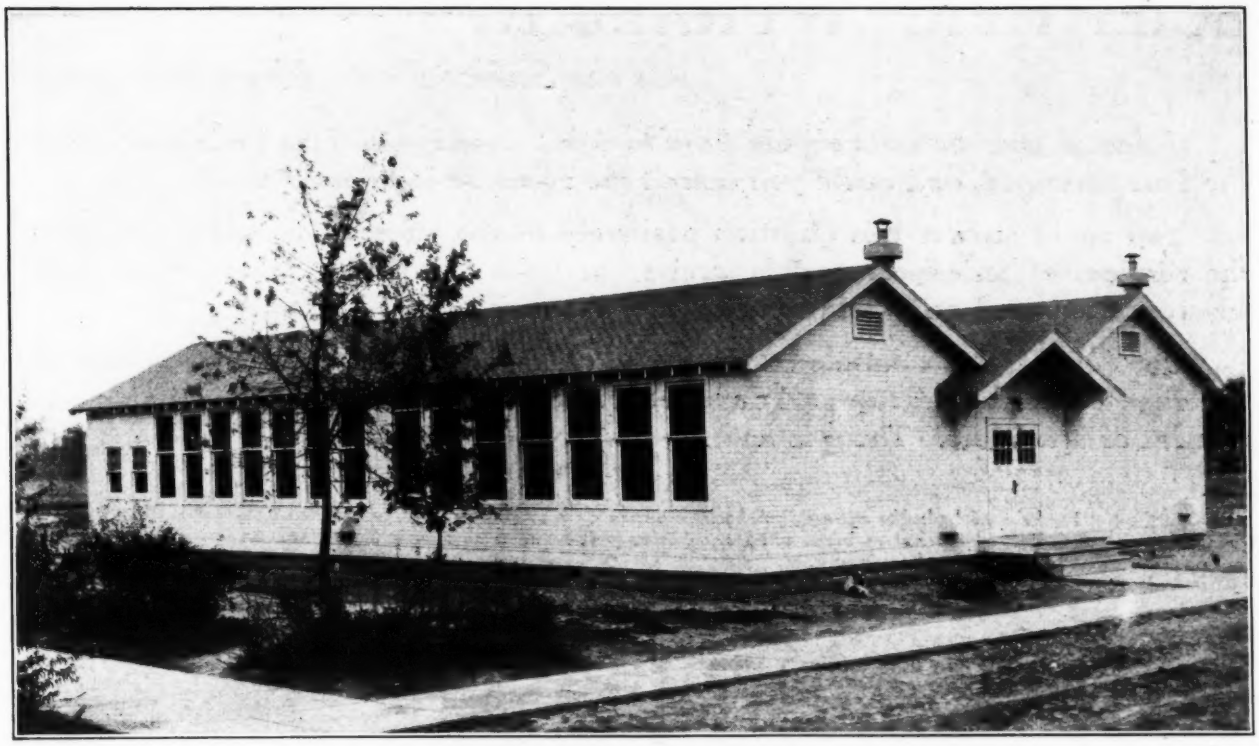
TEACHERS' SALARIES

—A plan for an increase in salaries for Chicago teachers amounting in all to $22,000,000 has been presented to the board of education by Supt. William McAndrew. Under the plan proposed by Supt. McAndrew, the sum would be added to the pay of 12,000 elementary and high-school teachers during a period of five years—$1,750,000 the first year; $3,200,000 the second, and increasing amounts thereafter. The pay of elementary teachers would be raised from a maximum of $2,500 to $3,200 a year, and that of high-school teachers from $3,800 to $4,500. Financing of the plan will be dependent upon the success of a fight for a higher tax rate, as no money is available at present.

—Lexington, Ky. The school board has adopted a rule which prohibits the employment of married women as teachers. The rule applies to married women who live with their husbands.

—Topeka, Kans. The school board has eliminated for the present the bonus of $50 paid to teachers for six hours of college work in summer school. The rule was intended to encourage teachers in improving their methods in the subjects taught.

—Cambridge, Mass. An advisory council of teachers has been established with the approval of the school board. The council will consist of one teacher from the high school, one from the grammar, the primary, the continuation, and the open-air school. The council will take up with the superintendent all grievances of teachers and other general matters.



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IF your community cannot shoulder the tax burden of an elaborate school building, Togan schoolhouses will solve the problem without sacrificing any of the real essentials of modern educational equipment.

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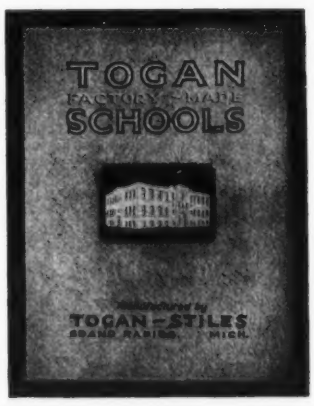

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NEWS OF THE SCHOOL BOARDS

—Cincinnati, Ohio. The board of education has leased six of the seven floors in the Richardson Building as headquarters for the school system. The rooms occupy 18,000 square feet of floor space and the rental amounts to $12,000 per annum. The board will remain in its present quarters until the lease expires in about a year.

—Central Falls, R. I. The board of education has adopted a rule forbidding the presence of newspaper reporters at strictly business meetings. Under the new plan, the newspapers are given formal statements of the meetings by the secretary.

—Marion, Ohio. Mr. F. C. Gegenheimer, Mr. H. S. Young, and Mrs. F. H. King have been reelected as officers of the board of education following the annual meeting. Mr. Gegenheimer was reelected as president.

—Shelby, Ohio. Mr. G. W. Hoffman has been appointed as the school-board's agent to handle all textbooks for the schools. A full line of books and supplies will be carried.

—Lexington, Ohio. The board of education, and Principal W. A. Renner of the high school have been sued by the father of a pupil for suspending the members of the junior class for participation in a party last October. It is claimed that the party was entirely innocent, inoffensive, and moral, and that the plaintiff attended it with the knowledge and consent of the parents. The action of the principal and board prevented the student from pursuing the regular studies and as a result damages of $2,000 are asked.

—Cleveland, Ohio. The school officials recently debated the legal phases of corporal punishment in the schools following charges of cruelty by eight pupils at the Kinsman school. The school officials contend that the state law gives the teacher control over the child from the moment he steps outside the home to go to school until he returns home.

—Brookline, Mass. The school board has established a second special class for mentally deficient children. Children having an intelligence quotient of less than fifty are to be excluded from the regular classes.

—The board of education at Corunna, Ind., has been eliminated and the school property and management turned over to Richland Township. The town's school affairs have been placed in charge of Mr. Edward Gushwa, township trustee of Richland township. The Corunna school had 96 students and five teachers and offered a three-year high-school course.

—Willimantic, Conn. The school board has asked the New England Transportation Company to grant special rates to school children transported to the city. It has been the custom in the past for the railroads and transportation companies to grant special rates to school children.

—A bill has been introduced in the Massachusetts legislature which increases the membership of the Boston school board from five to nine members and provides a salary of $1,500 a year.

—Newark, N. J. The city commission has taken steps to adopt a city ordinance requiring that all city employees live in the city. The new ordinance would apply to all city employees, including the schools.

—Lake Odessa, Mich. The board of education has adopted a resolution presented by the parent-teachers' association, providing that no class ring or emblem may be purchased by a class or class organization without the approval and consent of the board. No agent will be allowed to solicit a class or teacher without an order from the school board.

—Complete vindication of Roy Stewart, former sheriff of McCracken County, Kentucky, of an alleged shortage in school-tax payments to the county school board has been given by the McCracken County fiscal court. A careful audit of the school's financial affairs showed that Mr. Stewart had actually overpaid the board by more than $1,000. The situation was attributed to the filing of an incomplete report, due to a faulty system of bookkeeping.

—Mr. C. M. Helwig, director of vocational education at Monessen, Pa., has been appointed business manager of the school system. Mr. Helwig will handle the business affairs of the schools.

—The school board of Cambridge, Mass., has adopted a resolution providing for the establishment of a teachers' council. The council will consist of one teacher from each of the high schools, grammar, primary, and continuation and open-air schools. The council will take up with the superintendent of schools all grievances of teachers and matters concerning their welfare and the advancement of the school system.

—Byron T. Rees, superintendent of schools of Dayton, Ky., has been vindicated of charges of cruelty by the Dayton police court. Mr. Rees' case was dismissed on the strength of the common law which gives any school authority the right to inflict humane punishment on a pupil.

—Supt. A. E. Condon, of Lake County, Ind., has introduced a bill in the state legislature providing for the reorganization of the state board of education. The bill provides for an annual educational conference in each congressional district. The conferences will be made up of members representing all phases of educational work and are expected to afford an opportunity for cooperative work on educational problems. Each district is to elect one member of the state board to serve for a term of four years.

—Monthly statements of the proceedings of boards of education in Kansas will be required if a bill recently introduced in the legislature becomes a law. The bill provides that boards of education shall publish monthly statements of all proceedings, and that financial statements for each six-month period shall be published in January and July of each year. Under the bill, the records of boards of education will be open to inspection at all times.

—Cleveland, Ohio. The school board has prepared a resolution calling for the removal of the administration offices to rented headquarters. A movement has been begun for a $2,000,000 bond issue for new school headquarters. It is asserted that improper ventilation, heating, lighting, and unnecessary crowding of departments are responsible for reduced efficiency.

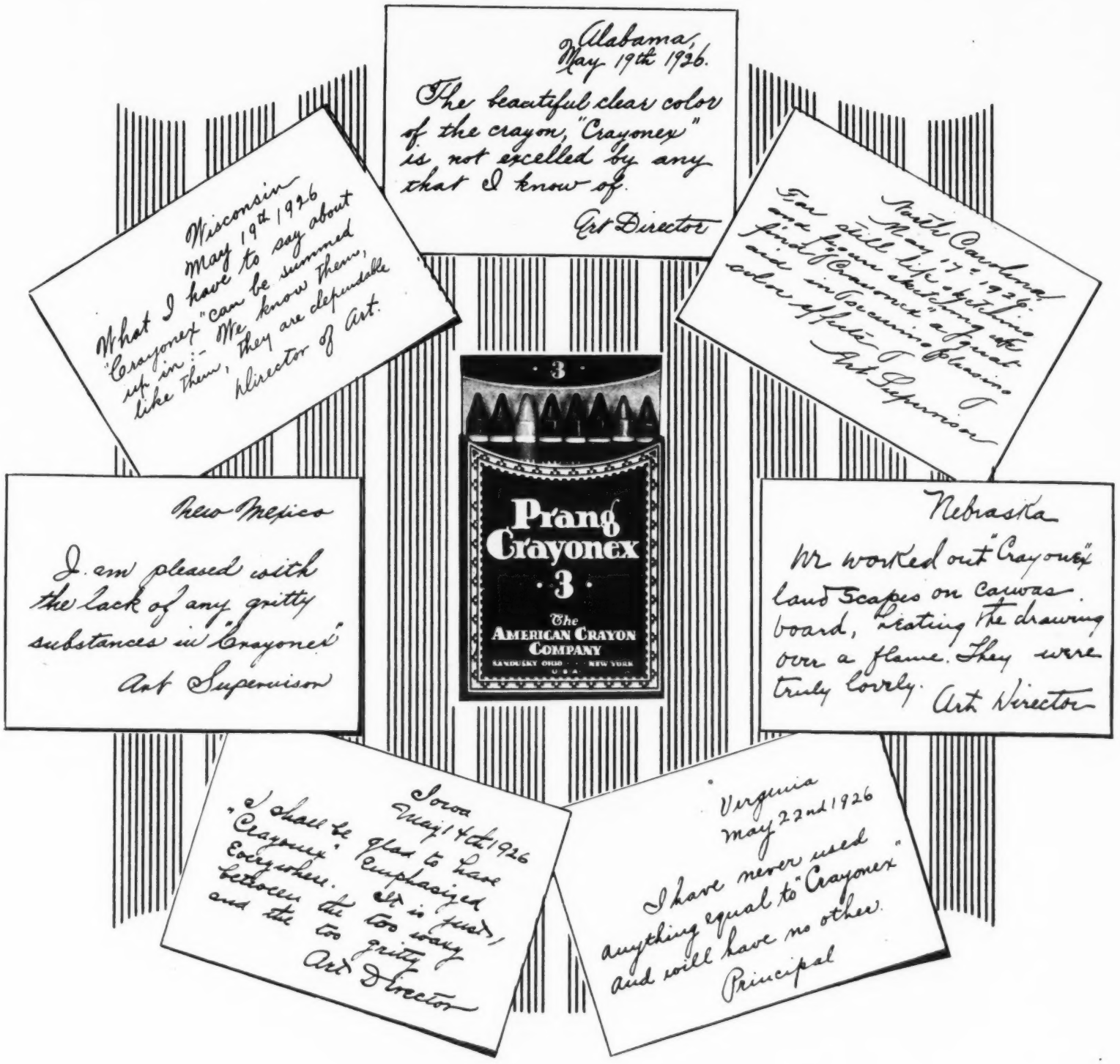
—Mr. F. G. Hogen has been reelected director of schools at Cleveland, Ohio. Mr. G. A. Gesell has been reelected as clerk-treasurer for two years, at an annual salary of $10,125.

—Omaha, Nebr. The school board has been asked to approve rules governing the work of the business manager. The rules, as suggested, are:

(a) The business manager shall be the executive officer of the board in all matters connected with the business administration as distinguished from the work of instruction, and shall be responsible directly to the board of education.

(Continued on Page 117)

THE TRUTH ABOUT "CRAYONEX"


Alabama,
May 19th 1926.
The beautiful clear color of the crayon, "Crayonex" is not excelled by any that I know of.
Art Director
Wisconsin
May 19th 1926
What I have to say about "Crayonex" can be summed up in— We know them, like them, they are dependable
Director of Art.
North Carolina
May 17, 1926
We still like Crayonex
Art Supervisor
New Mexico
I am pleased with the lack of any gritty substances in "Crayonex"
Art Supervisor
3
Prang
Crayonex
3
The American Crayon Company
Nebraska
We worked out "Crayonex" land scapes on canvas board, heating the drawing over a flame. They were truly lovely.
Art Director
Iowa
May 14th 1926
I shall be glad to have "Crayonex" emphasized. Everywhere. It is just between the too waxy and the too gritty
Art Director
Virginia
may 22nd 1926
I have never used anything equal to "Crayonex" and will have no other.
Principal

The above are extracts from actual letters of school authorities in charge of local art work. Names furnished on request.

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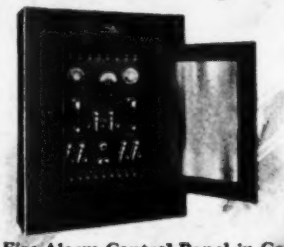
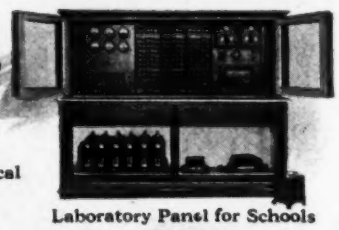


Fire Alarm Control Panel in Case

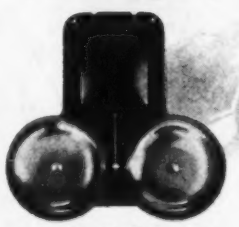


Laboratory Panel for Schools

Electro Mechanical Bell

"E T S" Fire Alarm Station

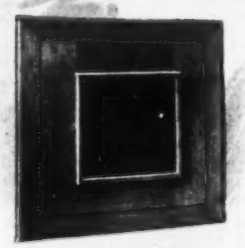
School Flush Phone



Double Gong

Type "S" Bell

General Call Button Plate



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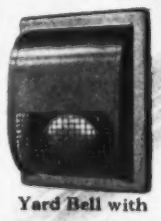
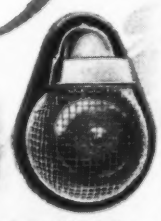


Yard Bell with Hood and Cage Type "D"

Type "S A" Fire Alarm Station

Station Call Case



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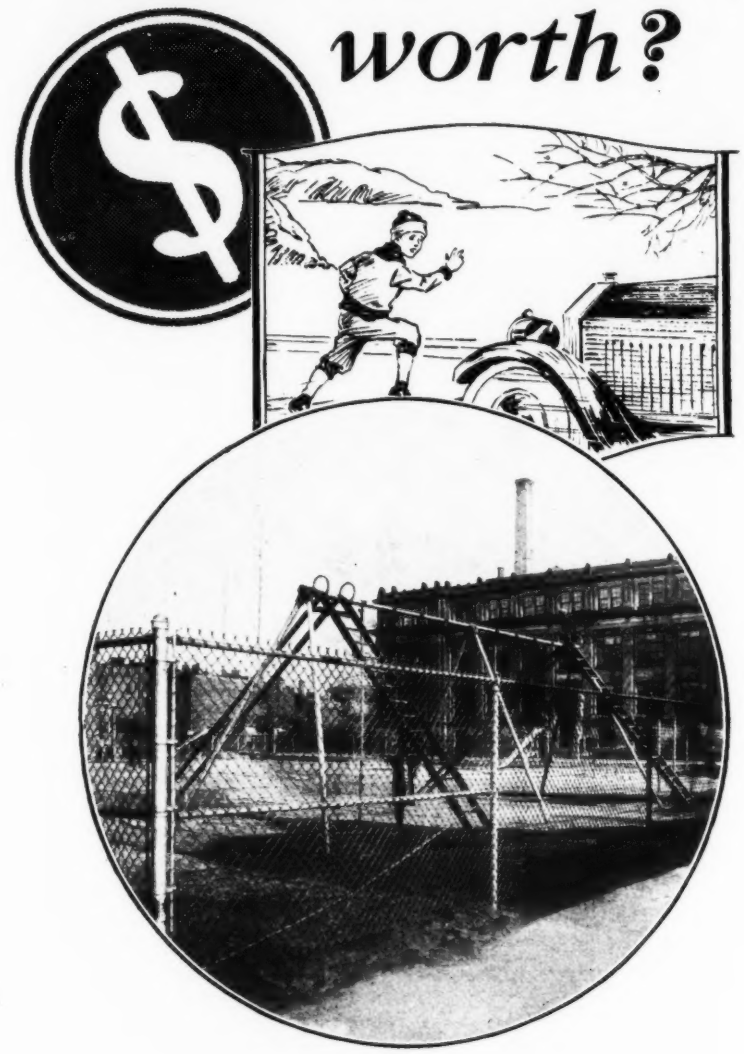

Reduced to the terms of money put in fence, it is worth dollars and cents.

Reduced to the terms of lives safeguarded it has value beyond measure.

Because it is essential to protect little citizens at play from dangerous traffic conditions, money must be spent. And far-seeing school officials are investing it in Page Chain Link Fence—the most permanent and economical form of protection for schools and playgrounds.

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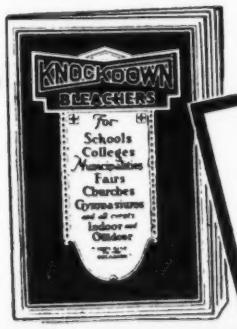

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(Continued from Page 114)

(b) He shall furnish a surety bond to be approved and paid for by the board in the sum of ten thousand dollars, conditioned for the faithful performance of his duties.

(c) He shall employ, subject to the approval of the board, such clerks, stenographers, janitors, workmen and other assistants as he shall deem needed to carry on the work of his department, and shall furnish to the secretary such clerical assistants as may be needed by her.

(d) He shall have general charge of all school buildings and equipment, of all janitors and workmen, and be responsible for the construction, operation, and maintenance of buildings and equipment and the upkeep of grounds.

(e) He shall purchase all real estate, merchandise and supplies ordered by the board, securing bids for the same whenever deemed advisable by him or pursuant to the directions of the board of education or its committees.

(f) He shall be in charge and responsible for all such merchandise and supplies when purchased and until distributed to the schools and other departments of the system, and in charge of all books and records pertaining to the purchase of and payment for the same, and of all the books and records generally of the business department, except as otherwise provided in these rules.

(g) He shall in conference with the superintendent of schools prepare the annual budget, setting out the estimated requirements for the several departments and the estimated receipts of the school district for the year, and submit the same to the board of education at such time as such board shall determine, and shall call to the attention of the board or its committees all proposed expenditures not contemplated at the time such budget as finally adopted was prepared.

(h) Whenever the board shall vote to borrow money on its bonds or notes, he shall have general charge over all proceedings in connection therewith.

(i) He shall in conjunction with the superintendent of schools advise with the board and its committees as to the selection of school sites, the plans, specifications and details of new buildings, and changes in existing buildings, and the purchase of equipment for the instructional department.

(j) He shall keep comparative statements of costs and expenditures in the various departments and schools, make such financial and other reports to the board from time to time as it may request, and shall perform such other duties as the board from time to time shall assign to him.

One paragraph in the rules is to apply to the duties of the superintendent of buildings as follows: "The superintendent of buildings shall perform such duties as the business manager from time to time assigns to him, and he shall make such reports to the business manager as may be requested by such officer."

—Mayor Arthur A. Rhodes of Cranston, R. I., recently lectured the school committee on some of the differences that had arisen. He said: "Public statements in the press emanating from this committee, have declared that members are at loggerheads, that they are acting like schoolboys, and the intimation has gone forth that your obstinacy has become so fixed by prejudice as to be wholly unyielding. This attitude on your part, prejudicial to the best interests of school government, cannot be permitted to continue, and if it is impossible to compose your differences, resignations should be tendered forthwith,"

—The school board and the city council of Racine, Wis., are in a tangle. The city council will not issue bonds to the amount of $600,000 under the present building program unless ratified by the voters in April. The council contends that the school board failed to keep expenses within the budget passed by the council.

—The Westmoreland County (Pa.) School Directors' association elected Frank Landis as its president. The other officers elected were vice-presidents, W. F. Shrum, Hempfield township, and W. H. Daugherty, Adamsburg; secretary, James B. Gallagher, Unity township; treasurer, J. R. Silvis, Hempfield township; auditor, Clarence C. Wylie, Lower Burrell township. The following directors were nominated for delegates to the State convention at Harrisburg: Dr. J. H. Ringer, J. B. Singer, Frank D. Barnhart, Howard Lynch, W. L. Davis, Harry A. Elder, W. C. Smith and W. K. W. Horner. The following resolution was adopted: Unequal and unjust taxation not only a constant source of discontent but a real drawback and hindrance in the securing of adequate funds for our schools should be considered an important subject for consideration and definite action at the Directors' State Convention and we hereby urge our delegates to do all in their power in conjunction with delegates from other counties in urging the legislative action that will remedy the discrimination in assessments throughout the state.

—Unless there is a revival in civic interest some of the members of the school board of Lansing, Michigan, will not allow their names to be presented as candidates for reelection in April. This announcement is made by R. W. Cooper, Spencer D. Kelley, Emily D. Mills, and Erie P. Teel, now members of the board in a signed statement which says: "We recognize also that the people of Lansing have been extremely negligent about the matter of registering and voting in school elections; that in the election two years ago less than 10 per cent of the persons qualified to register actually did register and vote—only about 3,000 out of a possible 20,000 or more. The negligence was equally prevalent in shop, store and business office. Less than ten per cent of the membership of many of the luncheon clubs voted. Shopmen and professional men were equally culpable in the failure to vote and the women were only a little better. We recognize further that with a light registration and a small vote any little group may dominate the school election next spring and control school policies for the ensuing six years.

—The Cambridge, Mass., school committee charges that the public school association of that city is trying to usurp the powers of the school authorities. The members of the school committee (school board) hold that the association has assumed a meddlesome attitude.

—The board of education of the Ada, Ohio, rural school district reelected the following officers: President, J. F. Stambaugh; Vice-president, A. Lewis Klingler; Clerk-treasurer, C. B. Moore.

—"School boards come, and school boards go, but Reuben W. Jones keeps right on being reelected secretary of the school board," says a Seattle, Washington, newspaper. Mr. Jones has been reelected for the 25th time. E. B. Homes was elected president to succeed Rev. Dr. Edward Lincoln Smith.

—Thomas Davies, a member of the Council Bluffs, Iowa, board of education was ousted by that body. Waite D. Durfee has been chosen to succeed Davies, who left the city in November for parts unknown.

—The Reading, Pa., board of education, having under consideration the selection of school sites, barred newspaper men from its meeting.

—The school board of Sioux City, Iowa, has worked out a series of maps showing the location

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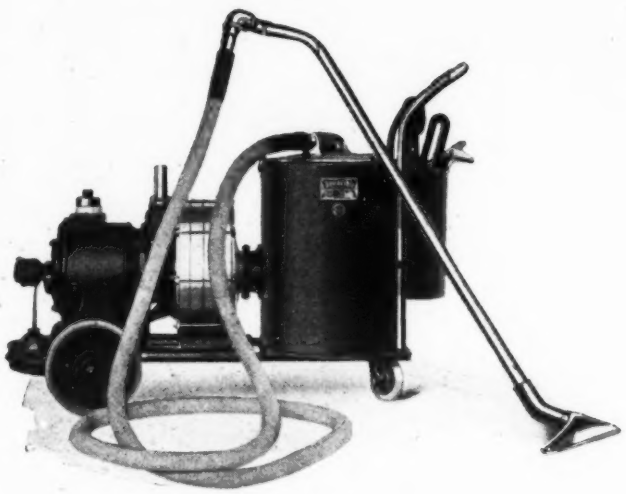

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of the school population and the population of preschool age. The maps will serve as a guide to the board in deciding where new schools or additions are needed.

—Kansas City, Mo. Acting upon the suggestion of the board of education, Supt. M. E. Pearson recently conducted a survey to determine the center of high-school population. The survey was undertaken preliminary to the selection of a site for a new million-dollar high school.

—Mr. Michael J. Morrison, 86, formerly superintendent of school-building construction of the board of education at Kansas City, Mo., died in January at his home. Mr. Morrison, who was with the board about thirty years, retired a year ago.

—The rapid growth of the district adjoining the village of Roxana, Ill., has culminated in a movement to reorganize the district and elect a board of education for administering the school system. Plans for the reorganization have been taken up with F. M. Scott, county superintendent of schools.

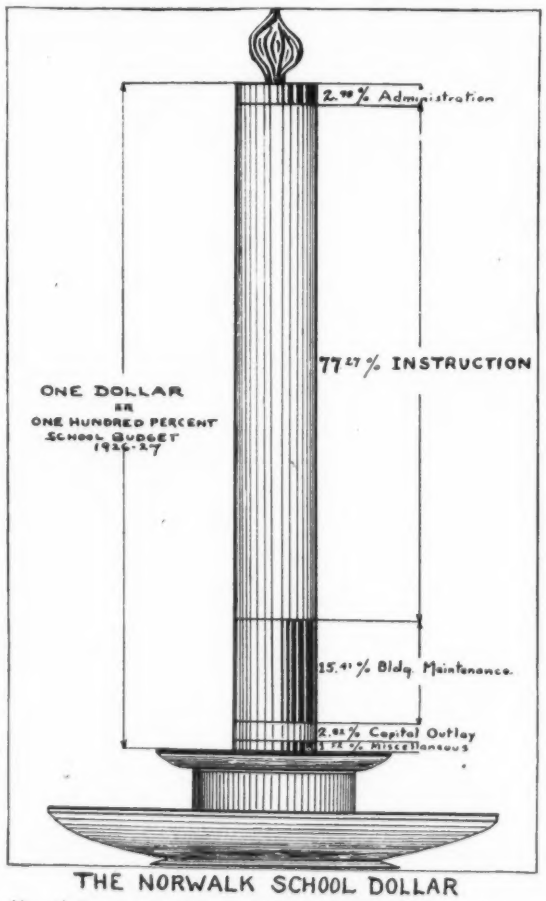
—Cleveland, Ohio. The board of education has approved corporal punishment in the schools. It was the consensus of opinion that sparing the rod spoils the child and that lack of discipline in the home calls for needed correction in the classroom.

—Changes in the manner of selecting the personnel of the Indiana State Board of Education have been asked in a bill presented in the legislature by Mr. A. E. Condon, superintendent of Lake County. The bill provides for the election of a member of the board from each of the thirteen congressional districts by specific bodies of persons interested in education.

Under the law, the district members would meet in each congressional district for the purpose of electing a representative from each district. Each member would serve for four years and would assume the duties of the present state board of education. The state superintendent would serve as chairman of the state board of education but would have a vote only in case of a tie.

—Springfield, Ill. Under a new rule of the board of education, children who were not born in Springfield, Woodside, or Capital Townships, are required to furnish birth certificates in entering the schools for the first time.

—Five members of the school board of Duncan, Oklahoma, who served in 1925-26, were indicted by the grand jury on the charge of having willfully and unlawfully drawn a warrant in the sum of $300 in favor of W. W. Isle for salary in the month of June, 1926. The men indicted are O. E. Ryon, secretary; Edward J. Leeman, former president of the board; Alton Tucker, C. T. Lawrence, and Harry Blake. All are former members of the school board. Secretary Ryon is the only one who is also a member of the present board. The indictment holds that the methods employed by the former board should be condemned.



THE NORWALK SCHOOL DOLLAR

How it keeps the candle of Norwalk Education burning.

AN EFFECTIVE CHART IN A SCHOOL REPORT.

—The village of Augusta, Mich., has gotten into a peculiar turmoil. Some weeks ago a recall petition of the members of the school board consisting of Lyle L. James, W. S. Drew, and Mrs. Blanche Bowen was formulated. The recall election was set for a day in January when an injunction was served by the sheriff upon the election of officials. The enjoiners hold that the school board members were duly elected and the cause for the recall was vague and insufficient. The court decided that out of 325 voters, only 69 had signed the recall which was insufficient.

—Newspaper reporters were excluded from a recent meeting of the board of education at Darien, Conn., by Chairman D. MacDonald. The action was criticized by the newspapers. Mr. MacDonald declared that there is no statutory provision requiring public session of the school committee. The organization rules of the average school board, he contends, call for business to be transacted in public, with the privilege of executive sessions, but no action.

—A committee appointment dispute in the Somerville, Mass., school board has led to the resignation of three of the Democratic members, Dr. F. J. Fitzpatrick, Dr. William E. Devine, and Miss Elizabeth Carnes. The complaint is that "the old timers were hogging the honors." This is denied by Dr. H. M. Stoodley and John J. Hayes, chairman and vice-chairman of the school board.

—John Grimshaw, Jr., in retiring from the Paterson, N. J., school board presidency urged timely action in the purchase of school property needed for future expansion. He believed that a policy of timely anticipation of future needs should become a fixed school-administration policy.

—The New Haven, Conn., board of education has taken a neutral position on the question of increasing the pension of retired teachers from $800 to $1,200. President Arnon A. Alling explains that since the school district is a part only of the city government, that the board of aldermen becomes the highest legislative body of the city. It is, therefore, for that body to determine a question which affects the taxpayers of the community.

—Dean J. M. Page of the University of Virginia, who served for sixteen years on the Virginia state board of education, will be succeeded by Col. H. C. Ford of the Virginia Military Institute. The members elected by the senate in 1926 are Dr. J. E. Williams, and Dr. J. A. Chandler.

(Concluded on Page 120)

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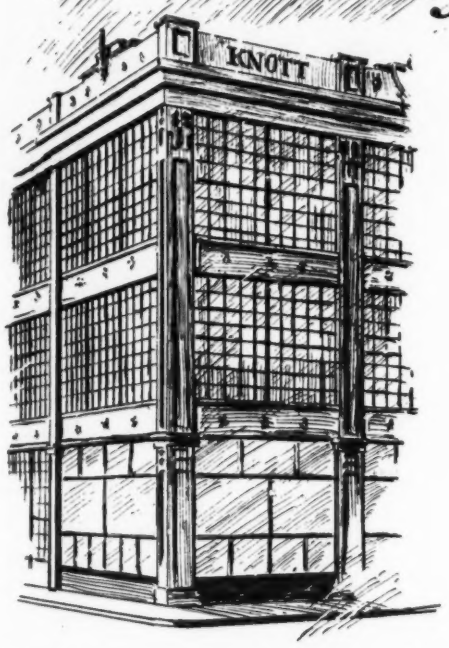

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STANDARD *for* EDUCATION SINCE 1895

(Concluded from Page 118)

—President H. F. Fahrenkrog of the St. Louis, Mo., board of education, instituted a movement whereby the legislature will be asked to establish a retirement fund for the 3,000 teachers now employed in the St. Louis schools. Mr. Fahrenkrog for several years has been active in behalf of the fund and was president of the board in 1925 when that body went on record as favoring enactment of a teachers' pension for cities in Missouri having a population of 300,000. He stated the resolution approved was introduced because he and other board members recognized the "great work done for the youth of this city by the teachers in the public schools of St. Louis."

—The Fremont, Nebraska, board of education is considering the question of closing the high-school auditorium against outside lecturers. Recent lecturers have raised the religious issue which has led to complaints on the part of school patrons. The high-school auditorium has been a central meeting place in Fremont and has been used for various affairs which are open to the public and which have for their purpose a pertinent discussion of questions. It has also been used for political meetings of all parties. Some time ago the use of the high-school auditorium was restricted, but as it is the only central place of the kind which is available the board later allowed meetings other than school functions to be held there, considering that as long as the auditorium was not occupied evenings, people of the city might as well get some use from it.

—The question has arisen at New London, Conn., as to whether pupils may be marked present or absent after being sent home by the medical clinic. A difference of opinion has arisen between Dr. Joseph M. Ganey and the parents. The latter hold that when a child is sent home through no fault of his own he ought not to be marked absent. This view is accepted by Supt. Warren A. Hanson, but the board of education will secure a ruling from the state department.

—Differences of opinion concerning the management of the Bureau of Construction and Maintenance of the New York City board of education have led the board of estimate to authorize Mayor Walker to appoint a committee of experts to investigate the Bureau. The committee is to consist of an architect, a builder, and an engineer, and is to determine whether the Bureau is overstaffed.

Pending the report of the committee, the board of estimate has allowed an appropriation of $75,000 to cover all the expenses of the Bureau for one month.

—At Evanston, Ill., a schoolhouse fire totaling a loss of $400,000 was recently incurred. The entire structure was consumed in the flames.

—Branford, Conn. The school board will shortly approve plans for a senior high school, to accommodate 500 students and to cost not more than $240,000. A proposed bond issue for the building will be passed upon by the legislature preparatory to the construction of the building.

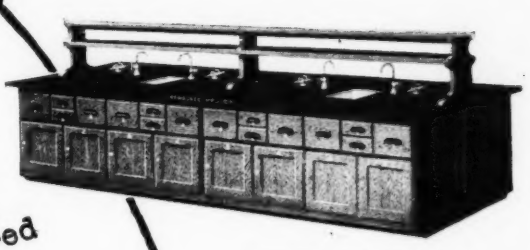
—The dedication of the high school at Toronto, Ohio, was featured by addresses by Vernon M. Riegel, state superintendent, and C. B. Ullery, state director of high schools. James M. Anderson spoke in behalf of the board of education. The affair was in charge of Superintendent S. C. Dennis.

—An answer to Thomas E. Johnson's charge that he was illegally removed from the office of state superintendent of Michigan and that the governor exceeded his authority in appointing Wilford L. Coffey was filed on behalf of Coffey. The answer insists that Johnson was guilty of malfeasance in that he accepted extra compensation and induced the state to do business with a surety company in which he was interested. Referring to a list of salaries paid for state vocational and rehabilitation work the answer charged a penciled notation, allowing Johnson $1,200 was written in different handwriting than that with which the payroll was marked approved.

THE LITTLE RED SCHOOLHOUSE TO WHICH MARY BROUGHT HER LAMB.

The schoolhouse to which Mary of the nursery rhyme brought her "little lamb" has been removed from Sterling, Mass., to Sudbury and reopened as a one-teacher country school. The expense was borne by Henry Ford, who was present at the re-dedication of the building in January last.

Two Fine Laboratories



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A Kansas Board of Education wrote: "We do not believe there is anything on the market comparable with Kewaunee Furniture."

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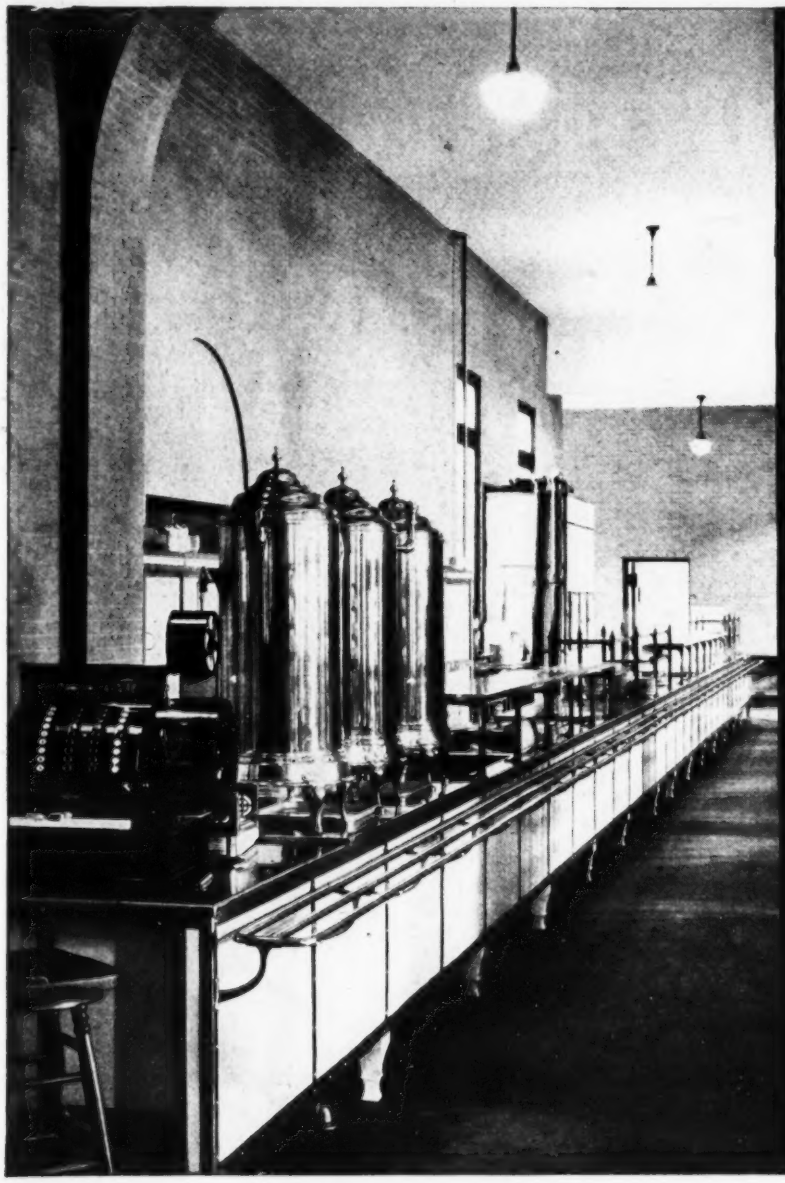

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NEW ORLEANS CLEVELAND ATLANTA DETROIT CHICAGO LOUISVILLE

PERSONAL NEWS OF SUPERINTENDENTS

DR. KEITH HEADS PENNSYLVANIA SCHOOLS

(See Page 40)

Dr. John A. H. Keith, formerly principal of the State Normal School at Indiana, Pa., has been appointed state superintendent of public instruction, to succeed Mr. F. B. Haas.

Dr. Keith is a graduate of the Illinois State Normal School of Urbana, of Harvard University, and Miami University at Oxford, Ohio. He entered upon his teaching career as a teacher and principal in the county and village schools of Illinois. He was professor of pedagogy at the Northern Illinois Normal School from 1899 to 1906, and head of the teacher-training department of the Illinois Normal University from 1906 to 1907. In 1907 he became president of the State Normal School at Oshkosh, Wis., where he remained until 1917 when he resigned to become president of the Indiana Normal School at Indiana, Pa.

Dr. Keith is a frequent contributor to educational literature and is the author of a number of textbooks on educational subjects.

NEW SUPERINTENDENT IN ALABAMA

Dr. John W. Abercrombie, twice state superintendent of education from 1898-1902, and from 1920-1927, retired from office on January 17, after a long service filled with constructive programs and policies which brought recognition from educators of Alabama and from other states of the Union.

Dr. Abercrombie had returned to the office for a second term in 1920 after a lapse of twenty years. During the earlier period he had demonstrated to the people the value of trained leadership in education and he came back recognized as one of the foremost leaders of the country in administrative ability. He possessed a rare fund of information and broad experience that fitted him to again take up the position.

A new school code provided for a program of reorganization and set up new agencies in the state education department that had not been performed before or that had been carried on in an unorganized way. During the past six years the working out of the program provided for readjustments linking the present practice with the first performance, in fact introducing the new without destroying important values of the old. In meeting all these problems, Dr. Abercrombie showed himself a master in the field of modern educational administration.

On the occasion of his retirement, Dr. Abercrombie was given a silver service by the members of the state education department as a token of the personal and professional esteem in which he is held.

Mr. R. E. Tidwell, the new state superintendent-elect, goes into office with the full confidence of the school people of Alabama. He is a capable and trained school executive, a close student, and a hard worker. For several years he served as assistant state superintendent and is thoroughly familiar with educational problems throughout the state.

MR. COOPER HEADS CALIFORNIA SCHOOLS

Mr. William J. Cooper, superintendent of schools at San Diego, California, has been appointed State Superintendent of Public Instruction, to succeed Will C. Wood.

Mr. Cooper is a graduate of the University of California and holds two degrees given by that institution. He was district superintendent at Piedmont for three years, and since 1921 had been in charge of the Fresno school system. He is a regular instructor at the summer sessions of the State University and is a frequent contributor to the educational magazines.

Mr. Cooper is an educator of splendid ability, a rare executive, and is intensely practical in educational matters. He is considered one of the foremost educators in the state.

—The new appointees to district superintendencies of the New York City schools are: Oswald Schlockow, principal of Public School 50, Brooklyn; Loretto M. Rochester, principal of Public School 3, Manhattan; William A. Rabenort, principal of Public School 55, the Bronx; Anthony J. Pugliese, principal of Public School 21, Manhattan; Herman H. Wright, director of high-school organization; Margaret P. Rae, principal of Public School 1, Manhattan; and Emanuel F. Van Dam, principal of Public School 18, Richmond. The position of district superintendent carries a salary of $6,600.

—Randall J. Condon, superintendent of schools at Cincinnati, is the author of certain school textbooks recently adopted by the board of education of Cincinnati. Now he has written to his publishers asking them to deduct the amount of his royalties from the price of books bought by the Cincinnati school board. This is in accord with a rule, made by Condon himself, that books written by Cincinnati teachers should not carry profit when used by the Cincinnati public schools. The Cincinnati *Times-Star* in commenting on Mr. Condon's action says: "This is a kind of highmindedness in public service that has not always been in evidence in this city where men in public life did not scorn to profit privately by their positions, legitimately enough but ethically not at all."

—A parent-teachers association at Tulsa, Oklahoma, charges that the board of education of that city is dominated by Superintendent P. P. Claxton. In a controversy which has arisen between the superintendent and the association, the board of education has sustained the former.

—Supt. F. A. Jensen of Rockford, Ill., has been reelected for another year.

—Mr. R. F. Hannum has been elected superintendent of schools at Ottumwa, Ia., to succeed H. E. Blackmar, who retires at the expiration of his term in July.

—Supt. F. M. Longanecker of Racine, Wis., has been reelected for a three-year term. Mr. Longanecker is completing his ninth year as superintendent.

—Mr. James N. Muir of Bethlehem, Pa., has been elected superintendent of schools at Quincy, Mass. Mr. Muir is a graduate of the University of Pennsylvania and has held the superintendency in a number of cities and towns.

—Supt. Thomas R. Cole of Seattle, Wash., has been reelected for another three-year term, beginning with August.

—Supt. C. W. Crandel of Monroe, Mich., has been reelected for another term.

—Dr. Thomas E. Finegan, former state superintendent of Pennsylvania, has become a promoter of the films as a factor in education.

—George M. Snodgrass was elected president of the normal school at La Crosse, Wis. He succeeds Dr. E. A. Smith, who died recently.

(Continued on Page 124)

NICKEL PLATED ALUMINUM SERVING TRAYS

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(Continued from Page 122)

—The athletic field connected with the schools of Long Beach, California, has been named the "Stephens Field" in honor of W. L. Stephens, superintendent of the Long Beach schools.

—Miss Myrtle Scoville has been elected superintendent of schools at Hartington, Ia.

—Supt. A. J. Stout of Topeka, Kans., has been reelected for a two-year term, beginning with August, 1927.

—Supt. J. D. McKinley of New Washington, O., has resigned

—Mr. John D. Loper of Phoenix, Ariz., has been elected president of the Arizona Education Association.

—Mr. J. Wilmer Kennedy, assistant city superintendent in charge of high schools of Newark, N. J., retired in December, having completed 42 years of service with the Newark school system.

—Mr. J. A. Dickson, formerly of Frederick, Okla., has been elected superintendent of schools at Borger, Texas.

—Supt. C. A. Rubado, of Plymouth, Wis., will retire at the close of the school year in order to continue his studies at Columbia University.

—Supt. A. A. McDonald, of Sioux Falls, S. D., has been reelected for a twentieth consecutive term. Mr. McDonald was first elected superintendent in July, 1907.

—Supt. J. C. Moore, of Fargo, N. Dak., has been reelected for another year.

—Supt. Ira H. McIntire of Green Bay, Wis., has been reelected for a term of three years. Supt. McIntire went to Green Bay seven years ago as assistant superintendent, and later became superintendent of the school system. At the close of his first term he was reappointed for three years.

—Miss Nellie B. Chisholm, who served as school commissioner of Muskegon County for twenty years, is a candidate for the Republican nomination for state superintendent. Miss Chisholm is at present the county probate judge at Muskegon.

—The announcement comes from Michigan that Wilford L. Coffey, who succeeds the deposed Thomas E. Johnson as state superintendent of schools, will become a candidate at the Republican convention to be held in March. Johnson has appealed the ouster before the state supreme court in quo warranto proceedings to test the right of Coffey to hold the office. The supreme court has thus far failed to hand down a decision which, it is believed, will prevent Johnson from seeking the nomination.

—Miss Hattie Yardley has been elected supervisor of elementary-school subjects at Greeley, Colo.

—Supt. M. C. Lefler, of Lincoln, Nebr., has been reelected for a three-year term.

—Supt. E. F. Arnold, of Pelham, N. Y., has announced his resignation, to take effect at the close of the school year.

—Supt. S. E. Weber, of Charleston, W. Va., has announced his resignation, which is to take effect at the close of the school year.

—Mr. Neal Wherry has been reelected as superintendent of schools at Holton, Kans.

—Mr. C. I. Bixler, of Valley Junction, Ia., has been elected superintendent of schools at Monticello, to succeed F. L. Mahannha, resigned.

—Mr. C. H. Moore has been appointed as acting superintendent of schools at Clarksville, Tenn., to succeed A. J. Smith, who resigned.

—Mr. George C. Carroll has been elected superintendent of schools at Terre Haute, to succeed J. O. Engleman. Mr. Carroll came to Terre Haute a year ago from Garrett, where he had been superintendent of schools.

—Mr. G. P. Randle, 62, former superintendent of schools at Danville and Mattoon, Ill., died at Cleveland, Ohio, following a cerebral hemorrhage.

—Mr. C. C. Underwood of Crawfordsville, Ind., has been reelected as superintendent for a three-year term.

—Mr. Charles A. Bowers of Ord, Nebr., has been reelected for a three-year term.

—Supt. E. C. Glass, of Lynchburg, Va., has completed 48 years of service as head of the school system. Dr. Glass is considered the oldest superintendent and the longest in service of any superintendent in the nation. Dr. Glass was given an honorary degree by Washington and Lee University and William and Mary College two years ago.

—Mr. J. R. Martin, of Cleveland, Ohio, has been elected to the position of research assistant to Dr. Dayton C. Miller, of the Case School of Applied Science.

—Dean J. M. Page, of the University of Virginia, on January 18, closed sixteen years of continuous service as a member of the State Board of Education. Mr. Page will be succeeded by Mr. H. C. Ford on March 1.

—Supt. W. L. Bachrodt of San Jose, Calif., has been elected president of the California Teachers' Association for 1927. Mr. Bachrodt has had a varied teaching experience covering a number of years in the western states. Since 1921 he has filled the superintendency at San Jose.

—Dr. F. C. Ayer, of Seattle, Wash., has resigned as director of research to accept the position of professor of education at the University of Texas. During the four and one-half years in which he was connected with the Seattle schools, Dr. Ayer prepared several reports on administrative research which gained national attention and were widely quoted.

—Dr. Paul R. Stevenson, professor of education and research associate in the Bureau of Educational Research, of Ohio University, died in January. Dr. Stevenson held a degree given by Park College, Missouri, and had a doctorate from Teachers College, Columbia University. He had been with the Bureau of Research since its organization in 1921, having charge of the school building and publicity service.

—George W. Hardin, who was elected superintendent of Green County, Tennessee, is the youngest man ever elected to any similar office in the state. Mr. Hardin is 25 years of age and is a graduate of the Greensville, Tenn., high school and of the Milligan College. He succeeds Joel N. Pierce who held the superintendency for fourteen years and who was no longer a candidate.

—Mr. L. F. Jones, of Kelso, Wash., has resigned from the superintendency after a service of twelve years. Mr. W. J. Matters has been elected to succeed Mr. Jones.

—Mr. N. R. Whytock has been appointed as full-time director of research work at Glendale, Calif. During the past year Mr. Whytock gave one half of his time to this work, the remainder being given to the administration of the Roosevelt School.

—Mr. L. S. Howard, formerly assistant superintendent of schools at Pasadena, Calif., has become head master at the Menlo School for Boys. Mr. Howard is a graduate of the Washington State Teachers' College and Stanford University.

—Mr. W. C. Alderson, superintendent of schools of Multnomah County, Oreg., has been cited by the Circuit Court at Portland to show cause why he should not be restrained from apportioning the school funds of the county under the provisions of the law pertaining to the duties of the superintendent. Under the 1925 law, as enacted by the legis-

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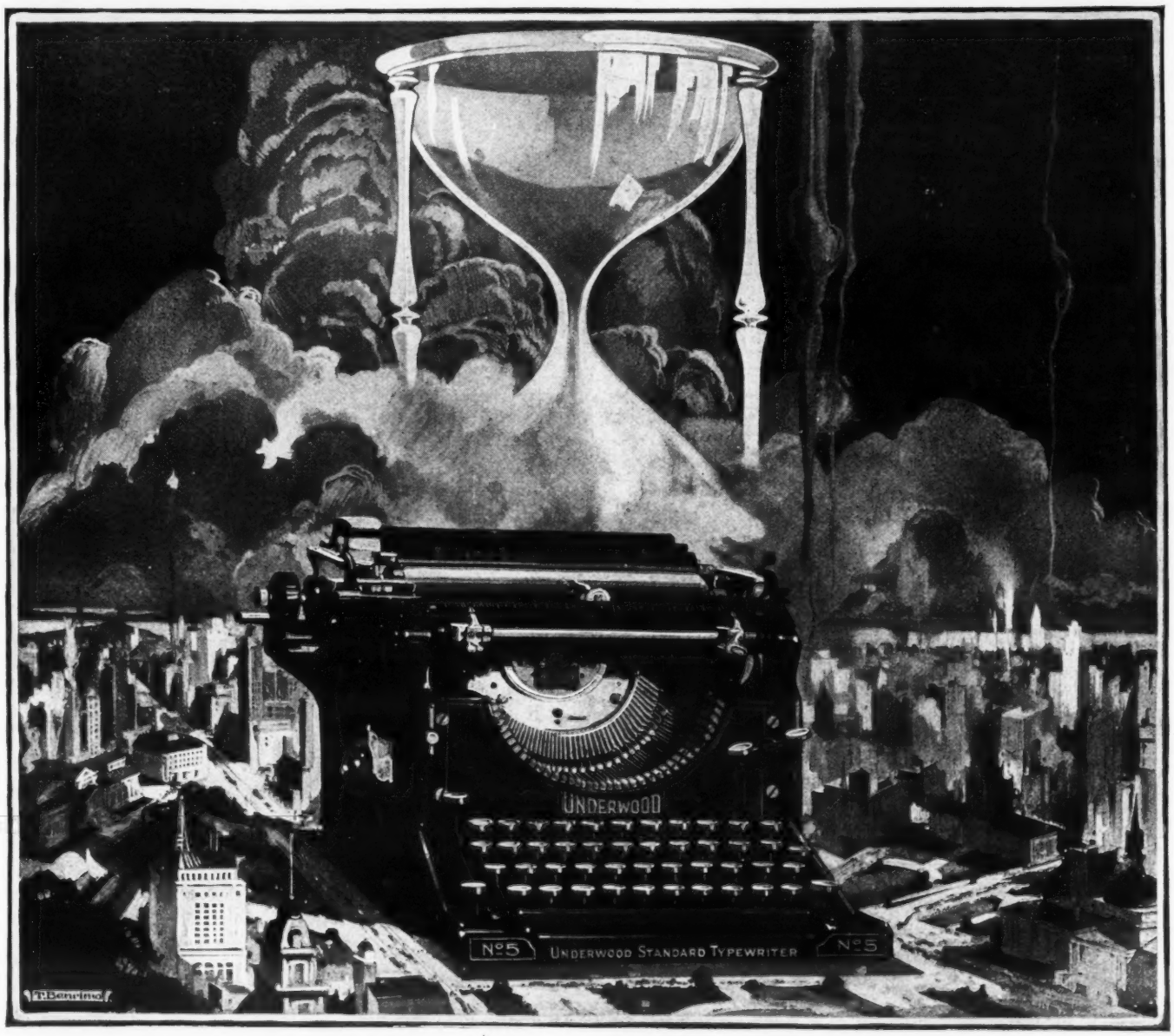

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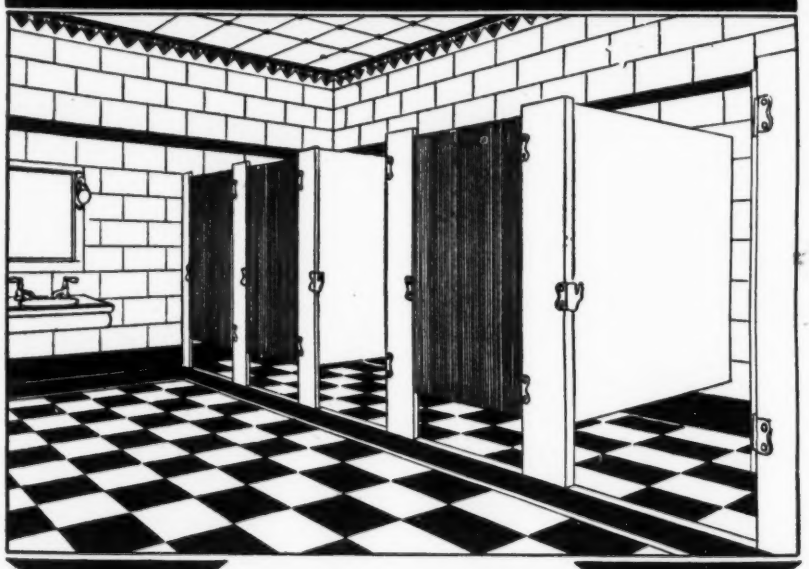

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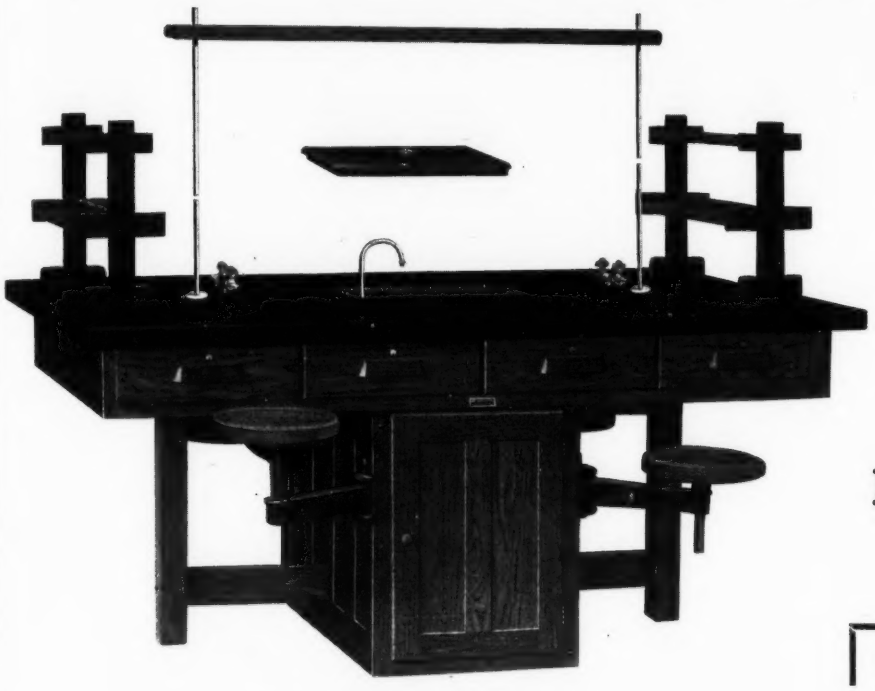

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(Concluded from Page 124)

lature, only the school districts outside of district No. 1, which is entirely within the city of Portland, have a voice in the election of the county superintendent, and that part of the county is required to bear the burden of the expense of the superintendent's office, which is about $7,000 annually.

While the city of Portland pays more than 90 per cent of the school taxes of the county, the city, under the law, is not required to stand any part of the expense of the county superintendent's office, even though the superintendent performs certain functions within School District No. 1.

—Supt. A. D. Montgomery, of Sullivan, Ind., has been reelected for another two-year term, at a salary of $4,000 per year. Mr. Montgomery has completed his fifth year at Sullivan.

—Supt. G. H. Sanberg, of Rochester, Minn., has been reelected for a third term, and his salary increased to $5,100.

—The Illinois State Teachers' Association elected the following officers: President, W. P. Morgan, Macomb; first vice-president, C. B. Smith, Pekin; second vice-president, John E. Miller, East St. Louis; third vice-president, Miss Ida C. Turnbull, Mattoon; secretary, Robert C. Moore of Carlinville; treasurer, Charles McIntosh, Monticello; member of executive committee, Justin Washburn.

—Charles S. Meek, superintendent of the Toledo schools, was elected president of the Ohio Teachers' Association. He succeeds J. A. McDowell, superintendent of the Ashland schools.

—Supt. J. F. Keating, of Pueblo, Colo., recently completed 31 years of service as head of the school system. Mr. Keating came to the school system in 1896 and has seen the teaching staff of the south side schools grow from 49 to 230. During his incumbency a senior high school, a junior high school, and a number of grade schools have been erected.

—Supt. George B. Miller, of Aberdeen, Wash., has been reelected for a three-year term.

—The new school at Danbury, Conn., will be graced with a bronze tablet bearing the names of the members of the school board who planned and directed its construction. These are Dr. Nathaniel Selleck, W. H. Cable, E. Thatcher Hoyt, Stephen D. Moore, Thomas A. Keating, Timothy Farrell, Harry McLachlam, W. C. Gilbert, and James P. Doran.

PERSONAL NEWS OF SCHOOL OFFICIALS

—The school committee of Worcester, Mass., elected the following officers: Chairman, Walter J. Cookson; vice-chairman, John A. Clough; business manager, Joseph Beals; assistant clerk, Will A. Gray.

—Mr. J. W. Gilbert has been elected clerk of the board of education at Segunda, Calif., to succeed Jay Smith, who resigned in January. The latter has been appointed as general utility man in the purchase of school property.

—Mrs. Virginia M. Acher has been nominated for the presidency of the Terre Haute, Ind., school board. Her election, it is said, is assured. She supports the reelection of Superintendent J. O. Engleman.

—William Luening has been reelected president of the La Crosse, Wis., board of education. The services of H. K. Holly, who has been a member of the board for sixteen years was acknowledged by the board in a resolution unanimously adopted.

—Dr. H. B. Nillhoff is the president-elect of the Dayton, Ohio, board of education. Luther Cline was chosen vice-president.

—Dr. F. C. Hoffer, president of the board of education at Lorain, Ohio, died in January following a brief illness. Dr. Hoffer had been a member of the board for the last twelve years.

—John D. Cassell, who has served the Philadelphia board of education as superintendent of buildings for 36 years, received a medal from the Philadelphia Society of Municipal Engineers. It is stated that Mr. Cassell saved the school system over three million dollars in schoolhouse construction and repairs.

—The Cincinnati, Ohio, board of education reelected W. J. Schroder as president, and Dr. F. B. Dyer, vice-president. In the committee assignments, Mrs. L. C. Fillmore was named vice-chairman of the supplies committee; John D. Sage, vice-chairman of the finance committee, and John H. Marckworth, vice-chairman of the building committee. Robert W. Shafer was reelected clerk-treasurer, and John B. Hollister remains chairman of committees on finance, accounts and auditing. Dr. F. B. Dyer heads committees on building, repairs and sites; James G. Fisk the committee on supplies, and President Shroder the committee of the whole. The board increased the salary of Charles W. Handman, business manager, $500 a year, it being raised to $6,000 annually.

—Mr. Irving T. Howe has been appointed as attendence officer in the Boston public schools.

—The business department of the Berkeley, Calif., schools has been reorganized with the appointment of Miss Clara Andrews as secretary, and Mr. H. A. Sawyer as office manager. Under a former arrangement, the offices of secretary and business manager were combined.

—Mr. J. T. Shumaker has been appointed as attendance officer at Akron, Ohio, to succeed G. L. Harding.

—Mr. Robert L. Blume has been elected secretary of the board of education at Ansonia, Conn. Mr. Blume succeeds Mr. Richard T. Tobin.

—Mr. John McDonald has been elected president of the board of education at Erie, Pa.

—Mr. Edward S. Canning has been appointed as secretary to the board of examiners of the New York city board of education, to succeed Mr. F. V. Daly.

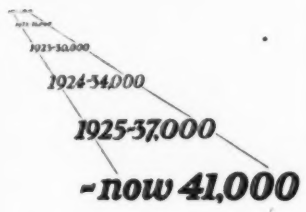
—Mr. J. H. Claxton has retired as secretary of the board of education at Yonkers, N. Y., after forty years of service.

—The Martin County, Fla., board of education was reorganized in January, 1927, with the election of Mr. F. W. Baker as chairman, and Mr. A. O. Kanner as attorney. Mrs. Emma R. Beavin and Mr. G. D. Falk are the new members of the board. Mr. Edward Mapp has assumed the office of county superintendent of schools, succeeding Mr. J B. McDonald.

MR. DWIGHT H. PERKINS ANNOUNCES CHANGE

Mr. Dwight H. Perkins, F.A.I.A., has announced his withdrawal from the firm of Perkins, Fellows & Hamilton, architects, and his association with Mr. M. C. Chatten and Mr. C. H. Hammond, under the firm name of Perkins, Chatten and Hammond, architects. The firm has its offices at 160 North LaSalle Street, Chicago.

At the right—The Wesport Junior High School, Kansas City, Missouri, is heated by a Webster System. C. A. Smith, *Architect*, Nate W. Downs, *Consulting Engineer*, A. McKinley Plbg. & Htg. Co., *Heating Contractors*.



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Carstens School, Detroit, Mich.
Central High School, Duluth, Minn.
Consolidated School, Cleveland, Miss.
Elvins High School, Elvins, Mo.
Lincoln School, Hastings, Neb.
Marlboro School, Marlboro, N. H.
Columbia School, South Orange, N. J.
Oswego High School, Oswego, N. Y.
Asheville High School, Asheville, N. C.
State Normal School, Bellingham, Wash.
Lincoln School, Oklahoma City, Okla.

SCHOOL LAW

—The Tennessee Supreme Court has upheld the legality of the law forbidding the teaching of evolution in the public schools of the state, but at the same time it reversed the judgment against Prof. John T. Scopes, of Dayton, who was tried and convicted of violating the statute.

In the decision as given there appears to be no case to be appealed, and legal experts do not see on what ground the issue could be carried to the Supreme Court at Washington.

—The Texas Court of Civil Appeals at Dallas, Texas, has denied an injunction to restrain the Dallas board of education from conducting health promotion work in the schools. The court, in refusing the injunction, held that the board acted within its legal discretion when it organized and installed a health department for the purposes for which it was established, and that it is being conducted for a lawful purpose.

—Governor Samuel A. Baker of Missouri, proposes a tax on inheritances, tobacco and amusements in aid of the state school fund. The News of Jefferson City, Mo., believes that from five to ten millions additional tax funds can be raised by this method. The governor recommends the creation of a permanent school fund, fifty per cent of which shall go to the public schools, in addition to provisions already made by the constitution, and fifty per cent to the higher educational institutions. The passage of this bill will solve the financial situation and the revenue will come from sources that will not be felt individually and the school districts may, if they so desire, lower their local tax rate for school purposes.

—The supreme court of Oregon refused to assume jurisdiction in mandamus proceedings brought by Row, Peterson & Co. to compel Governor Patterson and other members of the state board of education to sign contracts with the publishers for certain textbooks adopted by the state textbook commission at its annual meeting held here early in November. Under the ruling of the supreme court it will be necessary for the publishers to initiate proceedings in the circuit court and later appeal the action to the supreme court for final determination. An injunction was issued recently in the circuit court for Multnomah county restraining the state board of education from entering into contracts with the textbook publishers.

—A queer situation has arisen in the towns of West Bridgewater and Raynham, Mass. These two towns elect a superintendent jointly. When last April the three-year term of the superintendent expired, West Bridgewater voted against reelection. Raynham voted for reelection. It being a three to three vote, there was a deadlock. Legislation is now sought whereby the situation can be relieved. Just how this is to be done has not developed.

—The Arkansas legislature voted down a bill to abolish county boards of education and providing for popular election of superintendents.

—The school committee of Middleboro, Mass., has taken an unusual action. The state laws provide that a schoolmaster shall retire at the age of 70 years. The school committee has petitioned the legislature to enable Charles H. Bates, who has served Middleboro for 25 years as superintendent, to continue in office.

—A meeting held by the board of education of Brooklyn Borough, Camden County, N. J., at which the resignation of Muriel Miller, a member of the board was accepted, and his successor, Walter Johnson was elected, has been declared illegal by State School Commissioner Logan. The action was taken after a recess had been declared. Four members failed to return after the recess. Dr. Logan held that the declaration of a recess was in the nature of a sine die adjournment and that the session could not be reconvened without notice to all members.

—The constitutionality of the New York State legislative act which authorized the religious instruction of pupils in public schools one hour a week during school hours outside of the school buildings was unanimously upheld by the appellate division of the supreme court. The decision was in the test case brought by Joseph Lewis, President of the Free Thinkers' Society, against Dr. Frank P. Graves, State Commissioner of Education, to compel him by mandamus to order discontinued the plan used in White Plains as well as in the 130 cities and villages of the state where it was being practiced.

—One of the amendments to the school laws of Pennsylvania provides that "all doors of entrances into any building used for public school purposes shall be made to open outward, etc., etc."

—A peculiar case has arisen in Shorewood, a wealthy suburb of Milwaukee, Wis. The school board contracted for a new school and then discovered after the building was almost completed that village had exceeded the legal tax limit and that a shortage of $100,000 was incurred. One of the contractors who has a claim of $40,000 brought suit, lost out in the lower court, and then appealed to the state supreme court. In this test case the village authorities are ostensibly fighting the contractor but in reality want him to win. They are anxious to pay the contractor since the debt was entered into in good faith by both parties. If the case is decided against the contractor, the Shorewood board of education will appeal to the legislature to secure the necessary authority to settle the several claims.

—Legal proceedings to oust the school board of Lansdale, Pa., consisting of President H. L. S. Ruth, Secretary Ira B. Harr, and Treasurer Edwin P. Gotivals have been instituted before Judge Williams at Norristown. The charge is made that the board has failed to carry out the provisions of the school code.

—The so-called board of superintendents of the New York City school system has statutory powers in the matter of appointments and promotions. It is now proposed to abolish these powers and lodge the authority in the hands of the superintendent as the chief executive officer of the school system. A new bill framed aims to constitute the superintendents into a sort of president's cabinet. The superintendent is given the powers now conferred upon this board and is made fully responsible to the board of education for the proper administration of the schools. The associate superintendents would constitute a corps of expert assistants, corresponding to the secretaries in the president's cabinet, each of whom would be a specialist in some important function of education and be responsible, under the superintendent, for the proper administration of his respective field. Like the members of the Cabinet, they would be appointed on their superior's nomination—in this case, on the superintendent's.

—Last year's school board in Racine, Wis., entered upon contracts with teachers which provided for increased pay. The mayor and other city officials have refused to honor the increased payroll checks. The school board contending that the action of the Mayor is "arbitrary, unjust and un-

(Concluded from Page 130)

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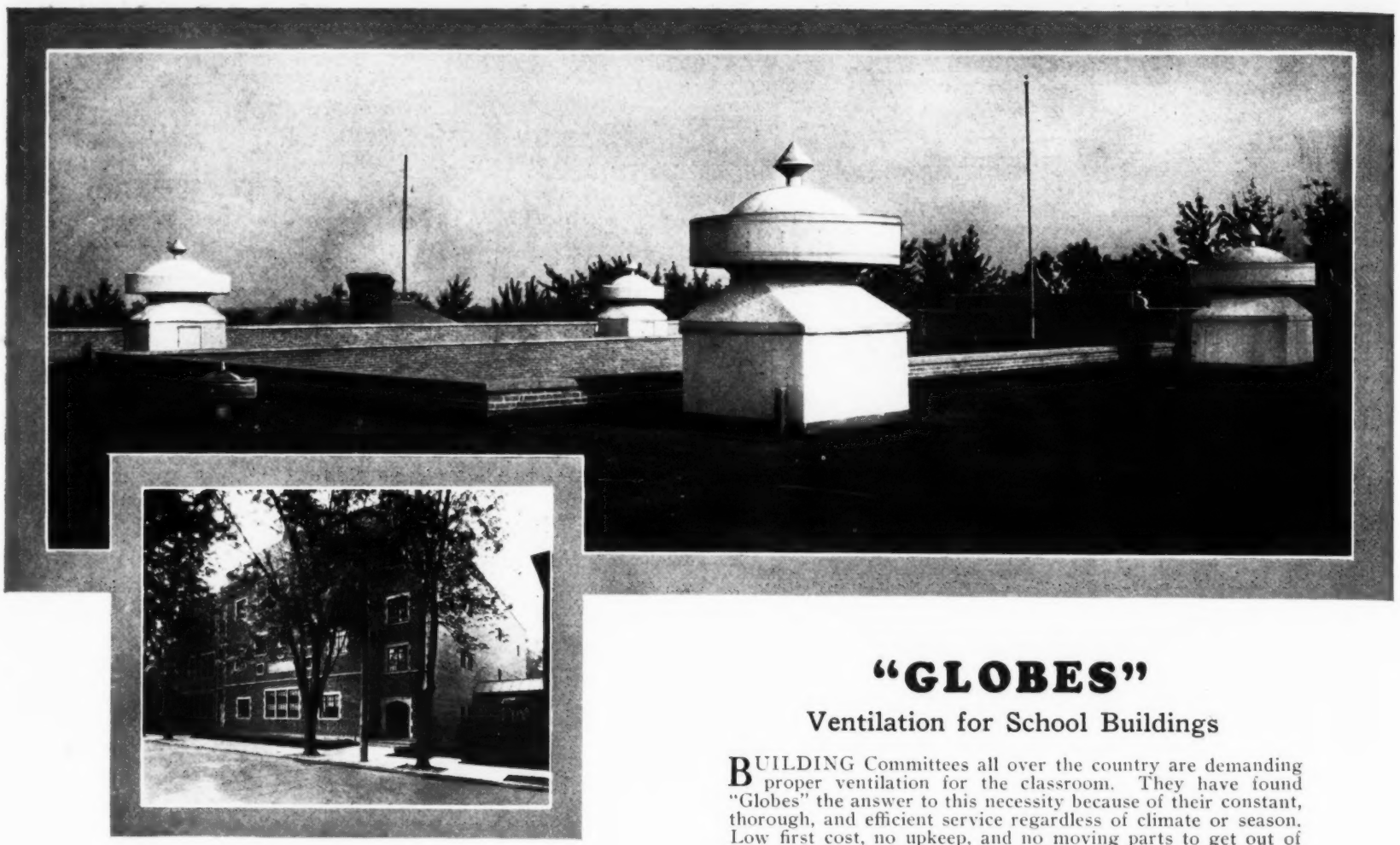

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(Concluded from Page 128)

called for," has employed legal talent to test the issue in court. The board further holds that there is a serious question involved, to-wit: Whether under the laws of the state of Wisconsin the school board or the mayor are to conduct and operate our public schools.

—The California legislature has under consideration a bill whereby school boards are authorized to audit the funds of all organizations connected with the school system. It would include student-body organizations, athletic organizations, school papers, book stores, and any other organized activities handling funds. The need of such legislation is indicated by the fact that school organizations handle hundreds of thousands of dollars annually. No bonds are required of the fiscal officers and no audit of funds can legally be required. As an instance of the large amount of money handled in this manner, it was cited that the Sacramento High School handled $95,000 last year.

NEW YORK COURT UPHOLDS DISMISSAL OF PUPILS FOR RELIGIOUS INSTRUCTION

The Appellate Division of the New York State Court recently affirmed an order of the supreme court denying the application of Joseph Lewis, of the Freethinkers' Society of New York, for a mandamus to compel the commissioner of education to issue instructions to the White Plains board of education to discontinue the dismissal of children for religious instruction. The case is of interest throughout the country since a number of school systems have adopted similar practices.

The opinion was prepared by Judge R. L. Davis, who pointed out that only the White Plains case is considered. He stated that the plan had been entirely successful in the city since no one had voiced objection to the commissioner or to the court. The decision was concerned primarily with the legal questions presented: (1) Does the rule adopted violate the provisions relative to aid in denominational schools? (2) Does such policy violate the provisions of the education law providing for compulsory education? Both are answered in the negative. In regard to the first he said:

> Here there was no property or public money used in aid or maintenance of any denominational school. Cards, not provided by the school, were distributed and the parents indicated thereon the place they wished their children to go for instruction. It was entirely voluntary with the parent whether the child was excused. There was some "check-up" afterward to indicate whether the privilege should be withdrawn. All that the petitioner can claim in regard to public expense is the time spent by the teacher during school hours in thus issuing and receiving the card, excusing the child, and ascertaining, if possible, if the parent's direction has been obeyed. The acts of the teacher are the same as when excusing a child to attend any religious or secular ceremony at its parents' request. It is a part of ordinary school routine and discipline. The constitution is designed for practical purposes and deals with realities, not fictions or conditions largely imaginary. It is intended to operate benignly in the interest of the governed. It should receive a broad, not a petty construction.
>
> Its commands are not violated by acts so trivial and remote.
>
> In regard to the second question, relating to the compulsory education law, the decision reads:
>
> The statute is general in its terms. Its purpose and intent must be sought in the conditions surrounding its adoption, the purpose to be served and the methods furnished for its administration. It was prompted by conditions of illiteracy. It was enacted to promote intelligence amongst future adult citizens. It deals with children between 7 and 14 years of age. It is to be made effective through instruments of its own creation—local and state officers.
>
> It would be a narrow construction that required every child, physically able, aged from 7 to 14 years, to attend at school every hour of every day the school was in session. It would impose upon children of tender years conditions as drastic and rigorous as those of military law and discipline. In some localities with insufficient school accommodations, there are double sessions for different children each day. The construction contended for would require all children to attend both sessions. There are occasions when it is imperative that the parents have their children at home for assistance. There are other occasions when they require their absence from school because of church or civic celebrations, or purely for pleasure that the family may be gathered together. It is to the credit of school authorities that children are readily excused on such occasions and no one has deemed it a violation of the law. Those who have had very young children in school know that it is common practice to excuse them after recitation. Older children, lacking only a few subjects for graduation, whose recitations we will say occur in the forenoon, are then excused and are not required to return. At examination time, children are excused except during the hours of examination. These facts are as commonly known as is the fact that they are not illegal.
>
> The legislature has not been unmindful of the rights or interests of parents relative to the guidance and control of their children. In the interest of the state it has enacted that children must be educated. With the great majority this legislation was unnecessary. It was intended to control the action of those delinquent and indifferent, not only to the interests of the state but of their children. There was no legislative policy to interfere arbitrarily with the family relation by oppressive acts. Nor is there conflict in policy between the educational authorities and competent, intelligent parents. Both desire that children shall obtain the advantages of education which the state undertakes to furnish. It is natural that parents should wish their children to have religious instruction at any favorable opportunity. It is not thought wise that it should be given directly in the school. But when children are assembled, they may be sent elsewhere. We are told that in 23 other states there are in force methods similar to those employed here. The commissioner and local authorities have adopted a benevolent policy in which the interests of both parents and children are considered. They recognize that all education is not acquired in the schools; that except for subjects legally prescribed, the parents may select the studies their children shall pursue; that it is the right of parents to direct the destiny of their children and guide them along paths of filial duty as well as in those of obligation to the state; and that a belief in religion is not foreign to our system of government.
>
> With these conditions in mind the commissioner and his predecessors under general statutory authority, have made rules and regulations, interpreting and supplementing this compulsory education statute. A "bulletin" containing some of these rules has been generally circulated. It gives notice to school officers that at the parent's request a pupil may be excused one-half day weekly for music lessons. Likewise, children may be excused "on days set apart for religious observance and instruction." The practice is general in the schools at the request of parents to excuse children to participate in church or religious festivals, and to attend confirmation classes and other religious instructions. The commissioner delegates to local authorities the matter of excuse for absence, saying, "It is a matter of common knowledge and experience that no inflexible rule or set of rules can be established arbitrarily controlling the entire subject of excusable absences that will work justice in all cases and under all conditions."
>
> All these policies which naturally impress the liberal mind as reasonable and just, could not have been adopted if there had been blind and stubborn adherence to the strict letter of the statute. In its administrative work the department has followed the broad intent of the law. It has put in operation familiar principles of justice toward both pupil and parent, while accomplishing the purpose of education. We recognize that parents have as much right to have their children receive religious instruction as instruction in music during some porton of the school week. We give weight to the practical construction of this statute by those men of high character, who have been chosen to enforce it, and who have acted conscientiously and with trained skill in performing difficult duties. Such interpretation generally acquiesced in for a considerable period of time, is a circumstance of great importance in determining what construction should now be put upon its terms. Absences occurring through being thus excused, do not amount to irregular attendance. There is no such iron rule for attendance as appellant has invoked.
>
> The state by its educational policy seeks to build from its youth useful citizens of intelligence and character—not merely pedants and philosophers. In following this policy it should not only consider the wishes but invite the aid of parents. When the wish of parents for weekday religious instruction for their

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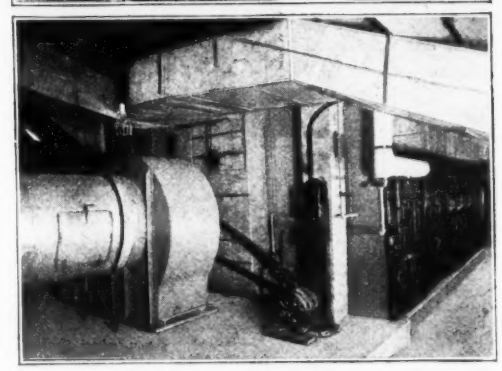
With the completion of the Summer School, four school buildings in Leavenworth, Kansas, will have been equipped with "The American System"



Firing Room, the Junior High School

From left to right: The North Broadway; The Junior High; and The Third Avenue Schools, Charles A. Smith, Kansas City, Architect

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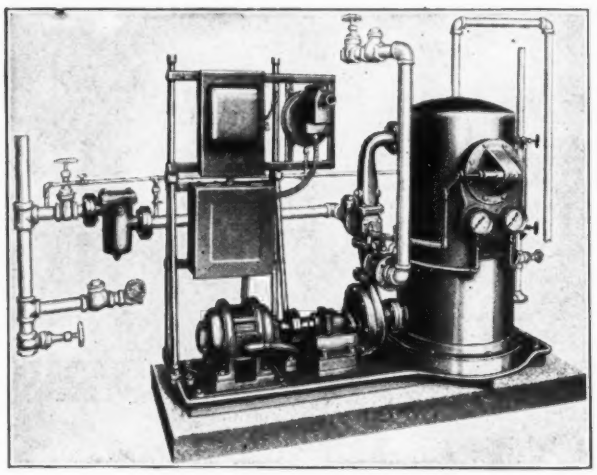

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(Concluded on Page 130)

children involves no serious interruption to school attendance, the State can have no purpose to defeat it. If local school authorities render their assistance by methods so innocuous as those detailed here, it does not amount to illegality. Reasonableness in the method adopted is the test of such legality. Neither the local school officers nor the commissioner of education have here violated that rule.

When genuine infractions of constitutional or statutory provisions relative to schools arise, the courts are not unready or unwilling to condemn them.

NEW SHOREWOOD RULES AND REGULATIONS

The board of education at Shorewood, (near Milwaukee) Wisconsin, has adopted a comprehensive set of rules and regulations for the guidance of its school system. The duties outlined for the officers, namely, the president, clerk, and treasurer, are similar to those usually assigned to such officers. The clerk, however, is held directly responsible to the superintendent.

On the subject of operation the rules say that the board of education shall function as a legislative body only, providing for executive control through its superintendent of schools, "but nothing in this article shall authorize the superintendent to alter the policy of the board in any way or to interfere with the right of a board member to investigate apparent irregularities in the school system and to report to the board or to the superintendent."

Under the heading of medical examinations the following is noted: "Regular medical examinations are given all children by the school doctor. Children who belong to religious denominations which object to medical examinations may be excused from the examination, provided that the health of other children is not endangered through this procedure. Children who come under this provision must, however, secure a permit from the doctor whenever they are absent." In case of epidemics, students who refuse to undergo vaccination or other medical measures instituted by the school health officer "shall at the discretion of superintendent be excluded from school for a period deemed sufficient by the health officer."

Complaints are subject to the rule that: "Whenever a parent has a grievance, such parent has the right to an audience with the principal or the superintendent and in case the matter is not adjusted satisfactorily, he may appeal to the board. No appeal will be heard, however, unless such charges are in writing, signed by the parent or person responsible for the same and presented at a regular meeting of the board of education." The high-school tuition is fixed at $40 a semester; grade schools $5 a month.

The duties of the superintendents are outlined as follows: "The superintendent shall be the general executive officer for the board, and he shall also be the chief supervisory officer. He shall visit each teacher often enough to acquaint himself with the work. He shall devote his entire time to the duties of his office.

"The superintendent shall attend all meetings of the board unless excused by the president, and he shall at each meeting present a report of school conditions, and such other matters as he shall see fit.

"The superintendent shall in conference with the secretary to the board prepare the budget for the school system each year, and he shall submit the same before the first meeting in June for the approval of the board. The board after due consideration of the various items shall adopt a revised budget and shall submit it to the voters at the school district election to be held the first Monday in July.

"All teachers are engaged on probation for a period of three years. No teacher may be dismissed during this period except under the following rules:

"The superintendent must show a record of the efforts made by himself and principals to improve the teacher during the period of service. A teacher must be given at least six weeks' notice during the first year of probation and at least one semester's notice during the second and third years of probation. No teacher should be dismissed except at the end of a semester."

RULES AND REGULATIONS

—Lawrence, Mass. The school board has ruled that applications of teachers for positions must first be presented to the superintendent. The recommendations of the superintendent are then presented by the teachers' committee to the board of education for approval or rejection.

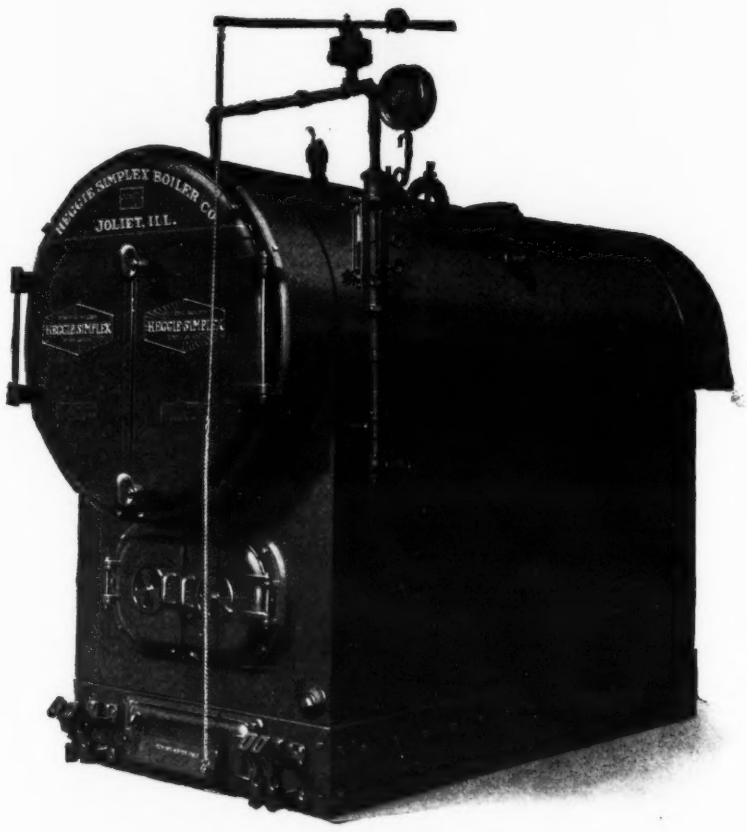
—Proposed changes in the by-laws of the New York City board of education make it a comparatively simple matter to bring charges against a teacher. The old regulations required more or less concrete reasons for charges, such as gross misconduct or conduct unbecoming a teacher, insubordination, neglect of duty, or general inefficiency. The proposed regulations, as approved, prescribe that the board of education shall hear and determine charges preferred against any member for (a) unauthorized absence from duty, (b) neglect of duty, (c) conduct unbecoming the position, or conduct prejudicial to the good order, efficiency, or discipline of the service, (d) incompetent or inefficient service, (e) violation of the by-laws, rules, or regulations of the board of education, and (f) substantial cause which renders the member unfit to perform his obligations to the service.

The proposed by-laws safeguard the tenure of those who have passed their three-year probationary period in much the same manner as the old by-laws. The regulations provide that no member of the teaching and supervising staff, including examiners, of the administrative staff or the staff of attendance officers, who has served the full and appropriate probationary period prescribed, shall be removed, except for cause after a hearing by an affirmative vote of a majority of the members of the board of education. Any member may be suspended by the superintendent of schools who shall report his action at the next regular meeting of the board of education, when all facts relating to the case are submitted to the board for consideration and action.

The by-laws also state that the teacher against whom charges have been preferred shall in person or by counsel be entitled before the trial to receive, on due demand, a copy of the charges and specifications, and shall be entitled to participate in person or by counsel, or both, in the trial of the charges to cross-examine opposing witnesses and to call and examine witnesses in his own behalf.

It is provided that the superintendent of schools, upon suspending any teacher, in advance of the filing of charges and specifications, shall inform the accused and the board of education of the character of the charges to be met. Such information shall not prevent the including in the trial of additional charges and specifications, provided the accused is informed thereof.

If the teacher under charges fails to appear at the trial, either in person or by counsel, the trial must proceed as if the person were present. They also give the board of education power to designate a committee of its members to conduct trials. The committee is to report its recommendations to the board of education, which will review the evidence. The final determination of the case, however, is to be made by a majority of all the members of the board.



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The Minnesota School Board Association Convention

E. H. Engelbart, Superintendent, Cannon Falls, Minn.

The Minnesota School-Board Association, boasting a record membership, met in the Ryan Hotel, St. Paul, Minnesota, for its sixth annual convention, Feb. 9, 10, and 11, 1927. Wednesday evening, Feb. 9, was devoted to general meetings of the standing committees of the association.

The Opening Session

A spirit of earnestness manifesting itself in sober realization that much work faced the assembled delegates marked the opening of the convention proper Thursday morning. The address of welcome by Hon. L. R. S. Furgeson, commissioner of education, St. Paul, furnished an impetus which did much to carry this spirit of earnestness throughout the sessions of the convention.

In his opening address, President B. K. Savre pointed out the need of increasing the membership of the association even though the present membership is the largest in its history. Achievement, he showed, is good as far as it goes; continued growth is essential to successful realization of the purposes of the association. Touching upon some of the problems which the various committees had studied since the convention a year ago, Mr. Savre launched into his address which consisted of a careful analysis of that part of Governor Christianson's inaugural address which pertained to taxes levied by the state for support of the university and for giving state aid to local schools. The information contained in the analysis saved the convention much time by clearing up a general misunderstanding of figures that the governor used in his address, and contributed not a little to the crystallization of sentiment as to which measures now before the legislature are worthy of the support of the association.

At this session, as well as at other sessions of the convention, relaxation at intervals was obtained by community singing led by Mrs. J. M. Hardy, school-board member, Mahnomen. So spirited was her leadership and so effective the results obtained that at a later session she was unanimously elected as permanent music leader of the association.

The Thursday Sessions

On Thursday afternoon, Dr. Fred Engelhardt, professor of school administration at the University of Minnesota, addressed the convention on "The Administration and Control of School Finances Through the Budget." Dr. Engelhardt argued that conditions being as they are in the state, the public wants to be shown why funds are needed. School boards must know what they want and they must be able to show a dollar's worth of service for every dollar expended. The budget is a plan to carry out what is being attempted educationally. The question, What are we trying to do? precedes any budget plans. Educational programs must extend over longer periods of time than merely the year covered by the budget. The budget is a means of obtaining effective administration of an educational program, but must not be allowed to become institutionalized. "Your job is to sell your school to the community." Supt. I. T. Simley, South St. Paul, then presented in a very effective way a specific plan of procedure in the preparation and execution of a budget.

An innovation which proved successful beyond the hopes of the leaders of the association was the dividing of the convention into three sections for Thursday evening's session. These sections were: high-school section, graded and high-school department section, and rural section. Each section was in charge of several leaders. The plan of the meetings was to furnish board members an opportunity to ask questions, impart information, and exchange experiences. The high-school section was led by Mr. C. M. Colsom, president of the board of education, Wadena, and Mr. E. M. Phillips, state high-school inspector of Minnesota.

Supt. A. L. Gaarder of Albert Lea, who was especially qualified to speak because of membership, in the board of education, talked on extra-curricular activities. Further discussion, led by Dr. C. L. Blunt, Albert Lea, brought into play experiences and policies from all parts of the state relative to the discussion regarding the handling of student activities in the respective schools. The leaders of the graded and high-school department section were Geo. E. Susens, board of education, Alexandria, and Theodore Utne, inspector state high-school departments of Minnesota. The rural section was led by Mr. C. H. Barnes, county superintendent of schools, St. Louis County.

Reports from each section indicate that much benefit was derived by delegates in questioning state inspectors and by state inspectors in questioning delegates, finding out from each other their respective viewpoints and responsibilities. The superintendents carried away with them a better equipment for serving their respective schools for having been at the meeting. So successful was the plan that each section determined to continue the practice next year and chose a leader to that end.

B. K. SAVRE,
Glenwood, Minn.,
President of the Minnesota State School Board Association.

The Friday Sessions

On Friday forenoon the convention was addressed by Mrs E. G. Quamme, past president of the Minnesota Congress of Parents and Teachers, St. Paul; Mr. T. A. Erickson, state leader of Boys' and Girls' Club Work, St. Paul; and Dr. J. A. O. Stub, pastor of the Central Lutheran Church, Minneapolis. The keynote of Mrs. Quamme's message was "Our most important problem: Our children." She made a strong plea to school boards to attempt to understand and support all activities tending to safeguard the children from harmful influences. Only one twenty-sixth of the child's time from birth to maturity is spent in school. That fact, she pointed out, not only adds to the seriousness of the problem of what best to do with the child in school, but challenges all available leadership in the community to recognize the importance of properly supervising all activities of the children during those years when supervision is so sorely needed.

Mr. Erickson presented facts and figures showing what is being done throughout the state in boys' and girls' club work. Dr. Stub made an eloquent appeal to boards of education to keep out of schools influences which undermine the moral teachings of the church. This, he said, was not a question for legislation, but rather one for each community to solve by thoughtful study based on a thorough acquaintance with what is being done in the local schools and a fearless determination to maintain the ideals of the republic inherited from our fathers.

The Business Session

Friday afternoon was taken up with the presentation of reports by committees, election of officers and directors, and completion of unfinished business. The election of officers resulted in maintaining in office each of the men who served the association during the year just closed: President, B. K. Savre, Glenwood; vice-president, M. W. Williams, Lanesboro; secretary-treasurer, John E. Palmer, Montevideo. The board of directors, chosen by the delegates from the several congressional districts, one from each district, are:

First District, C. L. Blunt, Albert Lea; Second District, Mrs. N. P. Radeck, Fulda; Third District, T. J. Lynch, Le Sueur Center; Fourth District, L. S. R. Furgeson, St. Paul; Fifth District, A. P. Ortquist, Minneapolis; Sixth District, C. E. Battles, Bemidji; Seventh District, G. E. Susens, Alexandria; Eighth District, A. E. McKenzie, Virginia; Ninth District, A. M. Hopeman, Moorehead; Tenth District, Albert Wickstrom, Isanti.

The following are the leading recommendations of the committees, adopted by the convention to serve as a guide to school boards of the state toward common action:

The committee on teachers recommended that: 1. Boards of education agree on a definite time at which to engage teachers; month of March suggested. 2. Only such high-school teachers be engaged who have had actual teaching experience in the subjects to be taught. 3. Recommendations to teachers be given by boards of education as boards rather than by individual members thereof. 4. The Teachers' Tenure Bill, now before the legislature, be not supported. 5. School boards throughout the state encourage all teachers to take extra work in professional training at least once every three years.

The legislative committee recommended that: 1. Ways and means be sought for the enlarging of the association of school boards. 2. Requirements for state aid to rural schools be based on a minimum of eight months' school and a first-grade certificate teacher rather than on a seven months' school and a second-grade certificate teacher. 3. Deficiencies in state aid for the years 1924-1925 and 1925-1926 be reimbursed to the districts affected by legislative appropriation. 4. An interim committee be appointed to report on the whole question of state aid to schools. 5. All bonds issued for building be retired within the time of usefulness of the building. The following schedule is suggested: Frame buildings, twenty years; nonfireproof buildings, thirty years; fireproof buildings, forty years. 6. The question of teaching on legal holidays be vested in local boards of education. 7. A committee of research be appointed to study the problem of rural extension schools. 8. The teacher-tenure law, now before the legislature, be opposed. 9. The teacher-institute law passed in 1925 be upheld and retained. 10. The county-superintendent-clerk-hire law, now pending in the legislature, be indorsed. 11. The county-board-of-education bill now before the legislature be supported. 12. The law on state aid for transportation of children in consolidated schools be amended to provide for reimbursement on a child-mile basis to those districts owning and operating their own busses.

The resolutions committee resolved that: 1. The present teachers'-retirement fund be dissolved. 2. Local boards of education be asked to take drastic steps to assure the holding of the Minnesota Education Convention at such a time as not to interfere with school work. 3. That the present supplemental-aid law to schools with high tax levies be maintained. 4. Quality of work be made the sole requirement for state aid to special departments. 5. The presence of an officer of the board be called for when the state inspector has important recommendations to make. 6. Fees to the school-board association be sent in advance to facilitate the granting of credentials. 7. Expressions of appreciation be extended to Dr. Fred Engelhardt, Commissioner Furgeson, and Supt. I. T. Simley for information given the convention and to Mrs. T. M. Hardy for splendid leadership in music. 8. Gratitude be expressed to the Ryan Hotel for hospitality and services rendered the association.

Perhaps no evidence gave greater proof of growth on part of the convention not only in the realization of what constitutes the common problems to be faced, but also in the recognition of how best these problems may be solved than was given by the sight of groups of delegates, state officials, and superintendents invariably to be seen after each session asking each other serious questions, answering each other patiently—withal intelligently discussing the agenda of the session just closed. Education in Minnesota has nothing to lose and everything to gain by the growth and strengthening of the Minnesota School-Board Association.

PUBLIC SCHOOL BUSINESS OFFICIALS MEET AT PHILADELPHIA

The National Association of School Business Officials will hold their annual meeting May 16 to 20, at Philadelphia, Pa. It is planned to devote the afternoon of May 18 to a visit to Valley Forge. The regular annual banquet will be held, at which Mayor Kendrick, Hon. J. J. Tigert, and Hon. Herbert Hoover will be the speakers. The tentative program prepared by the president is as follows:

Duties of a Clerk of the Board of Education, George King, clerk of the board of education, Salt Lake City, Utah.

Problems of the Smaller Cities (round table), A. B. Cousins, supervising mechanic, Richmond, Va.

Accounting and Its Problems in Schools (round table), Frederick D. Chambers, auditor, New York, N. Y.

Development of a School Building Program by a School-Board Architect, Harry D. Paine, Houston, Tex.

The Value of an Accounting System as Laid Down by the National Association of School Business Officials from the Viewpoint of a Superintendent, Dr. William J. Bickett, superintendent of schools, Trenton, N. J.

Women in the Service of a Board of Education, Rita Knowles, Moline, Ill.

Standard Forms of Schoolhouse Construction in Towns and Cities from 50,000 to 200,000 Population, William H. Gompert, architect of the board of education, New York, N. Y.

Steps in the Development of a School Building Program, Dr. George D. Strayer, Teachers College, Columbia University, New York, N. Y.

The Construction of a Building Program, W. E. Record, business manager, Los Angeles, Calif.

Report of the Committee on Bulletin and Handbook, D. D. Hammelbaugh, Chairman, Harrisburg, Pa.

Report of the Committee on Uniform System of Accounting and Cost Finding, J. O. Adams, Chairman, Dover, Del.

Present Day Ventilation, by a representative of the American Society of Heating and Ventilating Engineers.

Report of the Committee on Housing, J. D. Cassell, Chairman, Philadelphia, Pa.

Cafeterias: Their Management and Equipment, E. M. Brown, commissioner of supplies, St. Louis, Mo.

Cafeterias: Their Management and Equipment (round table), Charles L. Barr, assistant supply commissioner, St. Louis, Mo.

—The South Park School District of Beaumont, Texas, for the school year 1926-1927 has a taxable valuation of $17,650,000. The budget for the year amounts to $167,000.

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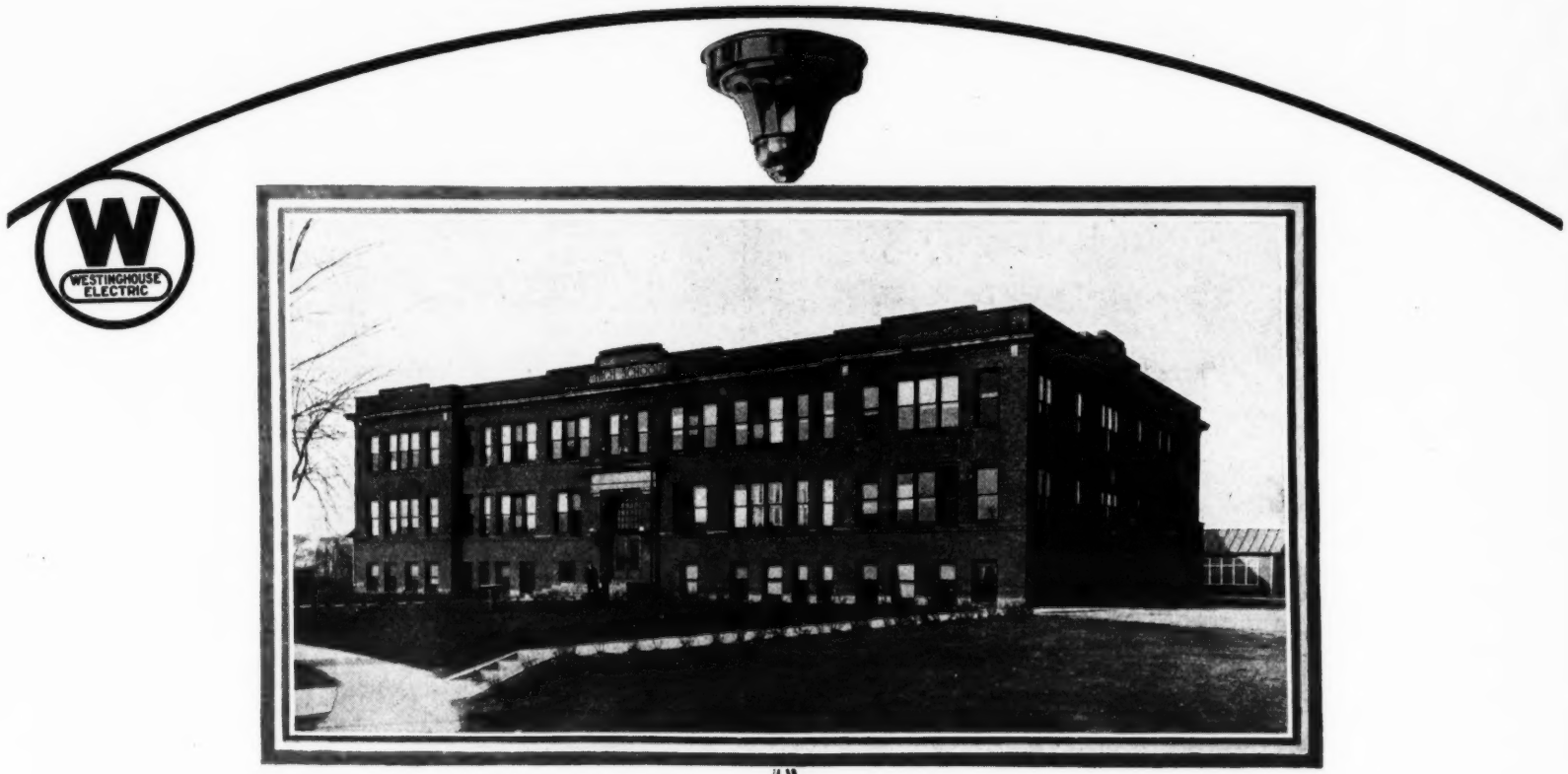

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South Milwaukee, Wisconsin.

J. C. Bettinger, President of the Board of Education.
H. R. Edwards, Superintendent of Schools.
Lyle G. Thomson, Principal.

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"During the darkest days our students experience no difficulty in reading.

"The Sol-Lux has our unqualified recommendation."

(Signed) LYLE G. THOMSON,
Principal

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Windows and lamp reflectors to be washed, walls to be dusted, ventilators to be adjusted—these are but a few of a hundred examples of "ladder-work" in every school. The use of the ordinary step ladder is a decided risk which may result in serious injury. Such risks are absolutely unnecessary. They can be eliminated with the—

DAYTON Safety Ladder

Note how closely the Dayton Safety Ladder shown in this illustration sets to the wall—a feature not found in step ladders.

Windows may be washed from the Dayton without leaning. Plenty of room upon the platform for pail. No necessity to run up and down.

Here at last is a ladder which can't sway, wabble, upset or collapse. It is built of aeroplane spruce steel braced and trussed throughout.

The large working platform provides ample foot and tool room. Every user of the Dayton is free to use both hands and lean far out of a vertical position with a feeling of perfect security. Better, faster work is the natural result of the Dayton's safety features.

The Dayton is made in sizes from 3 feet to 16 feet in height. A Dayton cannot close when erected for use but folds easily for storage.

Write for complete information and prices—no obligation upon your part.

The Dayton Safety Ladder Co.
121-123 West Third Street
Cincinnati, Ohio

Two more rooms for the second term

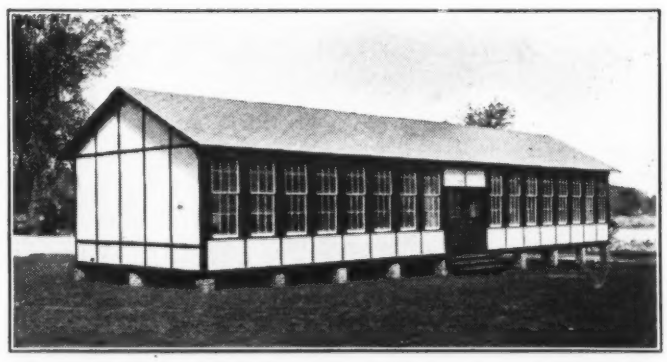
Whether you need one, two or more, you can get them quickly by ordering units of the Ambler Asbestos School Buildings shown below. Cold weather won't hinder seriously the erection of these buildings.

Paneled, roofed, sheathed with **fireproof** Ambler Asbestos building material of the most permanent and substantial type. The upkeep is negligible, as the main areas of these unique buildings have absolutely no need for paint.

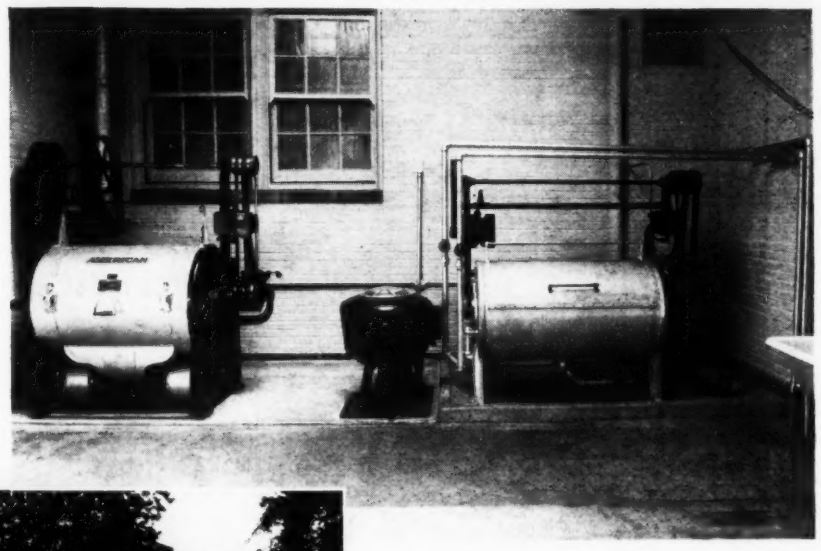
Shipped in standard, easily-handled sections that can be speedily erected, yet the buildings have the appearance of structures costing several times as much. Can be salvaged later at a large part of original cost.

May we tell you about our services and the cost?

Asbestos Buildings Company
1013 Liberty Trust Bldg., Philadelphia, Penna.
or
228 Pennant Ave., Pittsburgh, Pa.



McClain High School has its *own* laundry



No doubt you have noticed the growing tendency towards the installation of school laundries. McClain High School at Greenfield, Ohio, is one of the newest schools boasting of such a plant.

McClain High School, Greenfield, Ohio

A view of the modern and compact American-equipped laundry at McClain High School. This unit consists of a washer, an extractor for "wringing" and a tumbler for drying.

Lunch room linens, domestic science uniforms, towels, gym and bathing suits —all can be handled quickly and inexpensively. May we send you some interesting facts regarding some school laundries which we have installed?

The American Laundry Machinery Company
Norwood Station, Cincinnati, Ohio

The Canadian Laundry Machinery Co., Ltd.
47-93 Sterling Road, Toronto 3, Ont., Canada

Agents: British-American Laundry Machinery Co., Ltd.
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CHICAGO CORRESPONDENCE

The Chicago public-school budget for 1927 was adopted by the board of education January 26, 1927—the earliest adoption in its history. The appropriations for the five funds follow:

Fund	1927 Appropriation
Educational	$43,442,085
Building	31,200,000
Textbook	989,063
Playgrounds	688,293
Teachers' pensions	540,837
Total	$76,860,278

Doctor John Dill Robertson, former president of the board of education, is a candidate for mayor in the April election. Mrs. Johanna Gregg, present school trustee, filed papers as a candidate for mayor, but later withdrew and threw her support to Dr. Robertson.

Action on the names of four persons nominated by Mayor Dever for membership on the board of education seems imminent. Three months have elapsed since they were submitted and sent to the council committee on schools, fire, and civil service. Only one was approved by the committee —Mr. Charles Vopicka, former United States minister to Roumania. The others—Mrs. Helen Hefferan, present holdover school trustee, Dr. Otto L. Schmidt, noted physician and president of the Chicago Historical Society, and Mr. Walter Raymer, ex-alderman and bank president, have been rejected by the committee. The city council as a whole voted upon all four names on February 23. Alderman Arvey, floor leader of the administration, gave notice that he would bring in a minority report and attempt to push over all four nominees by summoning full strength of the mayor's majority.

The tactics of the committee members, the picturesque language used, the series of so-called investigations, have earned the committee the nickname "Hippodrome Committee." The Chicago *Tribune* comments editorially as follows: "The proceedings of the committee will strike most citizens as absurd. All four of the nominees are well known. They have been in the public eye for years. Their records of public service are open books, but they are being subjected to cross-examination as if they were charged with disorderly conduct in a police court. Their motives are being impugned. It is this way that Chicago aims to induce men of character and attainment to serve the public without salary."

Mr. Raymer failed of committee approval because he refused to appear before the body for quizzing. Dr. Schmidt and Mrs. Hefferan were rejected chiefly because of the stand of organized labor against them.

Former Mayor William Hale Thompson is running for office again, and part of his platform declares that, if elected, he will oust Supt. McAndrew. His chief plank is "America First." A typical attack on Mr. McAndrew is: "McAndrew is teaching the children of Chicago that the Boston tea party was a lawless destruction of private property and a wanton defiance of self-respecting government. He is telling them that after the revolutionary war 'nobodies' succeeded to power in New York, Philadelphia, and Boston, and that 'with the declaration of independence, patriotism became for the first time synonymous with disloyalty.'"

A poem read before the City Club of Chicago on New Year's Eve and attributed to the poet-alderman of the first ward runs as follows:

"Can the Canny Scot"
Poem Composed and Recited by Ald. Coughlin

We've taken on McAndrew!
It's our alarming lot
To have to tie the tinware,
To can this canny Scot.

The school board doesn't say a word;
The mayor speaketh not;
We husky city fathers
Must can the canny Scot.

We talk of deficits and things,
But the purpose of our plot
Is to put McAndrew on the blink;
To can the canny Scot.

He may be all they claim he is,
And the schools may go to pot,
But we'll never give a tinker's dam
If we can can this Scot.

Chicago has a principal who is only 26 years old. Harold W. Kent, graduate of Northwestern University, has recently been named principal of the Prussing school. His father is principal of the Garfield school. Mr. Kent's appointment caused one school trustee to express disapproval of too-youthful appointees. Assistant Superintendent William J. Bogan is reported to have replied, "Napoleon crossed the Alps at 26."

Chicago public-school educators have been considerably concerned with the problem of pupil failures since the publication two years ago of a report by the special secretary of the Chicago Principals' Club in which it was shown that the city-wide average failure rate was ten per cent and the range among the different schools was from 34 per cent to less than one per cent.

At the close of the first semester, all teachers and principals were required to report their promotion data on blank forms designed to make inter-school comparisons possible. The two forms call for the following information:

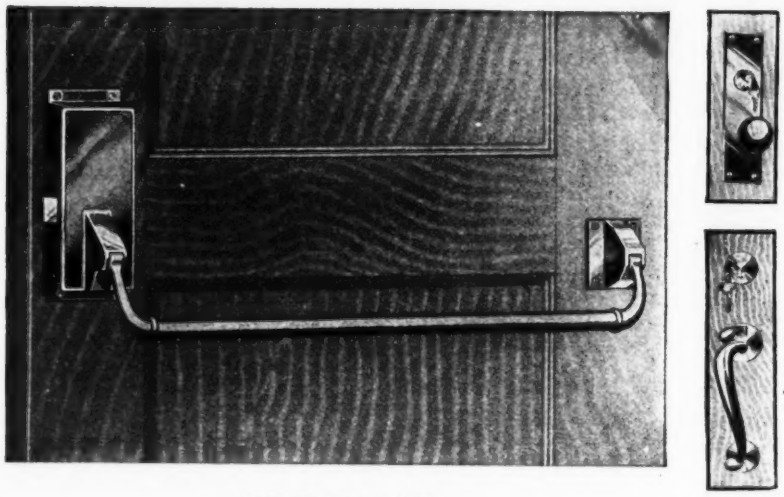
Teacher's report of promotions in elementary schools. Space is provided for giving the number of children who constituted the membership of the class on the last day of the semester, the number of regular promotions, the number of special promotions, the number of double promotions, the number of demotions, the number of nonpromotions, the total progress in semester units, and the progress rate.

The following explanation of these terms is given:

1. The grade is the grade of the class on the last day of the semester.
2. Membership is the number belonging plus those temporarily withdrawn on the last day of the semester.
3. Regular promotions are promotions to the next higher grade on the last day of the semester.
4. Special promotions are promotions to the next higher grade made before the last day of the semester.
5. Double promotions are promotions as from 1B to 2B, 1A to 2A, 2B to 3B, etc. A double promotion may be made either before the last day of the semester or on the last day.
6. Demotions are pupils who are sent to a lower grade.
7. Nonpromotions are pupils who are retained in the grade.
8. Total progress is the sum of items 3, 4, and twice item 5, minus item 6.
9. Progress rate is item 8 divided by item 2.

Smith's IMPROVED PANIC EXIT LOCKS

Smith's Improved Exit Locks are the Best Locks Made for Schools, Theatres, and Industrial Plants



Patented Dec. 1, 1925

Made in solid bronze or solid brass throughout. Exceptionally strong and simple in construction and operation.

Exit only Lock contains only 4 working parts.

Exit and entrance Lock contains 9 working parts.

Can be used on single doors or on double doors with center mullion. Size of case, 9 x 3¼ x 1½ in.

Installation made very quickly—No Mortising required.

No auxiliary bolt required, therefore no delicate movements.

Only one spring and that to eject bolt.

Positive locking feature operated with heavy gears, and not depending upon springs.

Permanent dog under cam, so constructed as to take up any wear which might occur.

Bolt projects ¾ in. from lock case, enabling bolt to have sufficient contact with strike in the event of door shrinking.

Ideal for thin as well as heavy doors.

Operates perfectly in conjunction with standard make of door closers.

Made to meet the use and abuse to which a school door lock is subjected.

NOW MADE BY **The Steffens-Amberg Co.**
Newark, New Jersey

WRITE FOR CATALOG

SCHOOL ADMINISTRATION NOTES

THE MALLOCATION OF SCHOOL OFFICES

In a report made by Professor Harry S. Ganders of the Colorado State Teachers' College, a study on school-administration offices is presented. It points to the administration headquarters of the Denver board of education as a model, but holds that a lamentable condition regarding school headquarters prevails in many cities. He says:

"The utter incompetency too often discovered among superintendents of the smaller cities, in their inability to answer questions about their school; their lack of knowledge; the too frequent, absolute absence of any plans and programs relating to pupil, teacher, building, and financial problems, is often due to the fact that personnel, equipment, and records are scattered about the city anywhere, apparently, but under their control.

"Offices that should be located in a school building are found in city halls, banks, stores, private offices of members of the board, private offices of nonmembers of the board, and private homes. These offices are not, as in those of certain corporations, 'branch' offices, but are in all instances integral parts of a single office system."

SCHOOL ADMINISTRATION

—New York, N. Y. The old boundary lines of local school board districts have been changed by the board of education following a redistricting of the city. The changes have been found necessary by the growing school population in some sections and the decrease in others. Six new districts have been created. Manhattan lost two districts, Brooklyn gained four, Bronx gained two, and Queens gained two.

—The board of superintendents of New York City has recommended that all concessionnaires now operating in elementary and junior high-school lunchrooms be discontinued and that the serving of the lunches be placed under the supervision of the department of homemaking of the public schools. The high-school lunch service would be continued as at present under the supervision of the principals and financed by the student general organizations.

The recommendation of the board of superintendents followed an intensive study and investigation of the lunchroom service by a committee appointed for the purpose. The investigation sought to determine how the annual cost of $80,000 for lunches might be reduced.

—A bill sponsored by Senator Westall of New York state seeks to effect changes in the organization of the state education department in order to make the education law conform to the state department law.

DR. EDWARD B. SHALLOW.

Dr. Edward B. Shallow, associate superintendent of New New York City, died suddenly of heart disease on February 8th at the age of sixty-five. Dr. Shallow was a native of New York State, was educated at Colgate College, and entered the employ of the New York City school system in 1893. He served successively as principal, district superintendent, and associate superintendent. In recent years he had been in charge of the school building program, and at the time of his death was chairman of the committee on buildings and sites of the board of superintendents, where he played an influential part in the construction of new schools. He was also widely known as a lecturer on methods in teachers' institutions.

Under the proposed law, the board of regents would continue as the governing body of the state education department and retain the power to appoint or remove the education commissioner or his deputy.

The commissioner would be the chief administrative officer of the department, but several changes are proposed in his relationship to the board of regents. At present, the regents may create various divisions and bureaus in the education department. Under the new law, such action would be taken by the regents, upon the recommendation of the commissioner. The power to determine the number of teachers in the State College and in the state normal schools would be controlled by the regents in place of the education commissioner. The state nautical school would be placed under the direction and control of the education department. The regents are to be authorized to give the commissioner such additional powers as are deemed necessary to carry out the provisions of the law.

—Chico, Calif. A new annual contract between the board of education and the Chico State Teachers' College for the handling of students in the junior-college department has been drawn up by Supt. C. H. Camper. The contract makes it possible for high-school graduates to get two years' undergraduate work at the local institution before leaving to attend the state university.

The report shows that a total of 263,196 pupils were enrolled, which was an increase of 2,427 over the number the preceding year. The average enrollment was 241,921 and the average attendance 214,024 in 1926. The 23 counties had an average daily attendance of 123,200, while Baltimore had only 90,844. The enrollment in private and Catholic parochial schools aggregated approximately 27,000 in Baltimore and 6,500 in the counties.

In comparing the 1926 school attendance with that of 1920, an increase of 38,712 is indicated covering a period of six years. The average yearly increase was 6,452. Every county, with the exception of Carroll and Calvert, showed an increase in enrollment over the six-year period. Baltimore had an increased attendance of 15,344 in 1926 over 1920, while a number of counties showed considerable growth over the period, the increases in the counties ranging from 2,000 to 5,000.

now —The universal Heating and Ventilating unit—*with quiet-operating single phase motor!*

Thirteen years of satisfactory operation in schools and other public buildings have proven the Universal Heating and Ventilating Unit—have made it famous for effective control of temperature, reliability, simplicity and economy.

Now, the development of a quiet-operating single-phase motor, mounted metal to metal on a steel board with three point lead mounting eliminates the need of a motor generator set, complicated switch-boards, wiring, etc., and insures *quiet operation* under *all conditions*.

Universal Heating and Ventilating units are suitable and highly recommended for school and public building work—they are backed by the American Blower Company's reputation and resources—and sold through the nation-wide American Blower Sales and Engineering organization.

It will pay you to get all the details

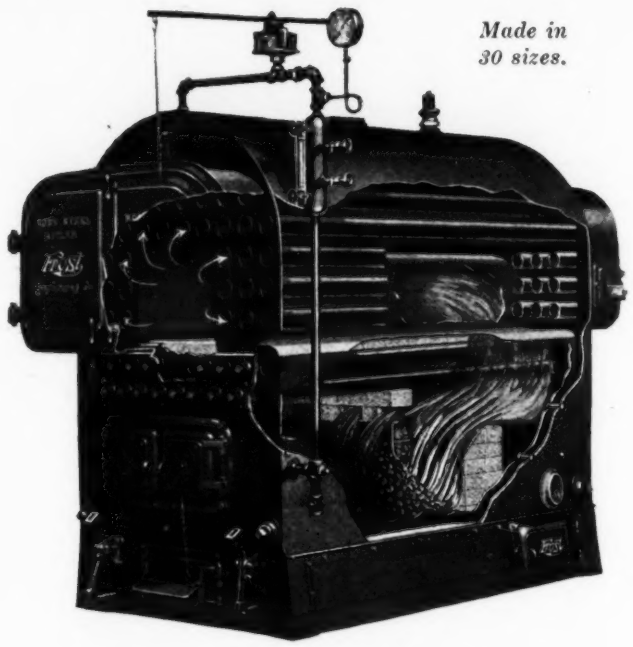
AMERICAN BLOWER COMPANY, DETROIT, MICHIGAN
BRANCH OFFICES IN ALL PRINCIPAL CITIES
CANADIAN SIROCCO COMPANY, LIMITED, WINDSOR, ONTARIO

(548)

American Blower

"Sirocco" VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT

MANUFACTURERS OF ALL TYPES OF AIR HANDLING EQUIPMENT SINCE 1881



Made in 30 sizes.

Excess Warm Pure Air or Epidemics

The quick spread of school epidemics is usually traceable to inadequate ventilation because of lack of a dependable supply of heat.

The School Board which looks conscientiously to every detail of ventilation or equipment spends much careful thought on the purchase of the proper heating plant.

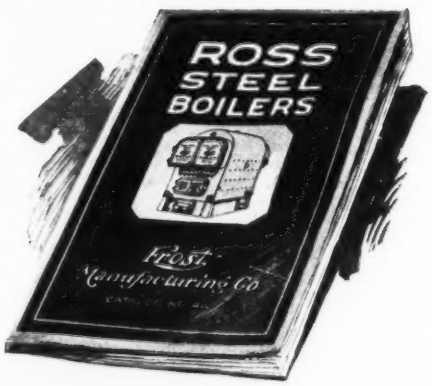
Let us refer you to notable installations.

ROSS Boilers

are deserving of the name "The Schoolhouse Boiler." No house of learning is too large for their capacities or too small to be heated economically.

There are many patented features which insure a steady, even flow of heat from low grade coal or oil with little stoking attention.

The extreme care of manufacture allows for the most rigid of city or state inspection and the price is unusually low for this high quality product.



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The Frost Manufacturing Co.

SINCE 1851.

Main office and works: 1524 Henderson St., Galesburg, Ill.

BRANCHES:

943 Syndicate Trust Bldg., St. Louis, Mo.
15 Park Row, New York, N. Y.
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2309 Union Central Bldg., Cincinnati, Ohio.
112 W. Adams St., Chicago, Illinois.
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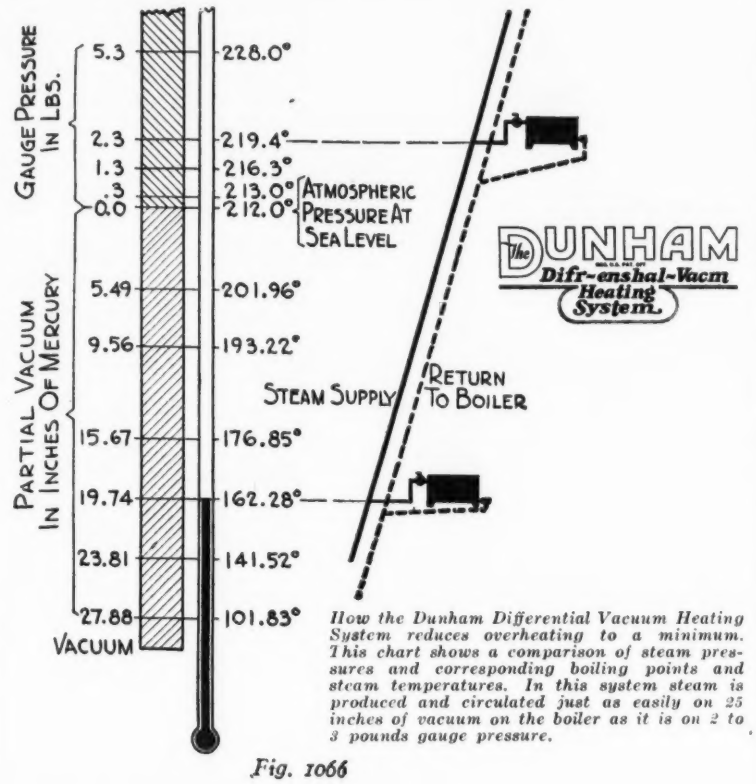
Peoria, Illinois.



How the Dunham Differential Vacuum Heating System reduces overheating to a minimum. This chart shows a comparison of steam pressures and corresponding boiling points and steam temperatures. In this system steam is produced and circulated just as easily on 25 inches of vacuum on the boiler as it is on 2 to 3 pounds gauge pressure.

Fig. 1066

DUNHAM saves fuel by eliminating overheating

In the Dunham Differential Vacuum Heating System for schools the radiators operate efficiently under wide variations in steam pressure and with steam at temperatures ranging from 133° to 220° or higher if needed. This corresponds to an operating range of 25 inches of vacuum to 2 or 3 pounds of steam pressure.

The steam circulates during the greater part of the heating season under a high vacuum in the radiation. This materially lowers the boiling point of the water in the boiler and effects marked fuel savings.

This remarkable heating system avoids the loss due to over-heating by regulating the heat emission of the radiators so as to equal the heat loss from the building, and maintain a desired room temperature ***regardless of outdoor temperatures.***

Demonstrated fuel savings with this new Dunham system of heating range from 15 to 40%. Write us today for complete information and vitally interesting records of performance.

C. A. DUNHAM COMPANY

DUNHAM BUILDING

450 East Ohio Street, Chicago

Look for the name DUNHAM.

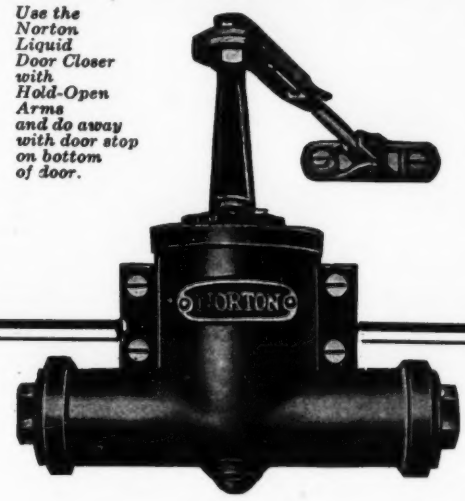
This nameplate identifies a genuine Dunham Radiator Trap.

Over sixty branch and local sales offices in the United States and Canada bring Dunham Heating Service as close to you as your telephone. Consult your telephone directory for the address of our office in your city.

The DUNHAM HEATING SERVICE

The NORTON Closer With Hold Open Arms Is Best Suited For Schoolhouse Work

Every Schoolroom Should Have One



Use the Norton Liquid Door Closer with Hold-Open Arms and do away with door stop on bottom of door.

1st. The doors are closed with a uniform speed, which gives the pupils a chance to go through a door without getting caught or injured.

2nd. Having two speeds, the speed at the latch can be set for absolute quiet—no latch necessary.

3rd. The Hold-Open Device connected with the arm of the Door Closer is automatic, a child can operate it—just a push or pull on the door is all there is to do it. Does away with door stop, hook or strap to hold the door open.

SERVICE:—We have expert servicemen on call, free of charge.

PRICE:—The price is right. Send for a representative.

THE NORTON DOOR CLOSER CO.

2900-2918 N. Western Avenue, Chicago, Illinois.

A Partial List of Schools NORTON Equipped

Skinner Junior High School, Denver, Colo.

North East High School, Minneapolis, Minn.

Chicago Public Schools

Toronto Public Schools

East Side High School, Cincinnati, Ohio.

Cass Technical High School, Detroit, Mich.

Technical High School, Omaha, Nebr.

THE BIG ISSUE IN SCHOOLHOUSE VENTILATION

(Continued from Page 62)

are maintained, air can be recirculated. The possible range for recirculation of air lies between 56 per cent as a minimum if the recirculated air is not washed and cooled, and 80 per cent if it is properly conditioned. with a probable higher maximum yet to be determined. The maintenance of these conditions, or modifications of them according to newer data, offer no insuperable difficulties to architect or engineer. Competent men must work out each separate problem involved, and full collaboration must obtain throughout between architect and engineer. No formula, health experts to the contrary, will fit all cases. The installations will vary from open windows in the south to split systems, double capacity, in severe latitudes of the north, but when a school building is released for public service its performance will be in accordance with specifications and its maintenance under competent supervision assured.

"Individual reactions to heat and cold does in a sense become a criterion, for the individual does not derive his sense of physical comfort from the opinions of experts, whether in engineering or health. A volume could be written on the individual idiosyncrasies regarding preferred temperatures, but it is sufficient to mention here that the director of applied physiology, Leonard Hill, who is responsible for the series of ventilation reports by the British Research Council previously referred to, declares that all his dicta are based upon the reaction of normal persons, that every disease has its own special air and temperature requirements. Cold air is an enemy to the malnourished and a stimulating friend to the well fed. Conditions suitable for adults are enervating for children. Thomas R. Crowder emphasizes the extreme variability of individual response. In his study of the ventilation of Pullman cars, Crowder found the most serious complaints coming from the occupants of cars overheated and malodorous from soiled clothing and unclean bodies, but with air chemically pure according to the most exacting standards of ventilation. Conversely, he found people contented and comfortable in stagnant air both foul and unsafe. The most obstinate and persistent ventilation tangle ever encountered in the writer's own personal experience was solved by the installation of shower baths in a St. Louis school, and the requirement of a daily bath for foreign children who had previously been "sewed up" for the winter. Clean clothes and clean bodies are important factors in air hygiene, and before making ventilation tests in a given situation it is a wise precaution to see that no large percentage of garlic eaters is to be reckoned with.

Architects Have No Formulae

Architects offer no formulae for school ventilation. They are openminded enough on the one hand to dispense with mechanical ventilation in isolated situations and exceptional instances where the air is pure and noise or odors offer no problem, and on the other to provide the utmost limit of air treatment and transport where crowded cities, manufacturing process, or physiological requirement call for it. The general trend favors year-round air conditioning with cooling in summer and heating in winter rather than return to earlier, uncontrolled methods. In certain southern cities where factories do not pollute the air the writer has planned school buildings for outlying districts which rely entirely upon open-window aeration after the heat is shut off in early morning. Wide halls, suitable orientation of building, and general layout make such solution possible. An added expense for mechanical ventilating systems would be superfluous. In northern latitudes such a scheme would be beyond control. It would represent wasteful and ineffectual planning. Here and there commercial exploitation has influenced ventilation practice unduly. Hot air furnaces still survive. Many and various plans for chemical treatment of air have had their vogue. It is seldom, however, that ventilation vagaries survive more than a single school administration. The fundamental principles growing out of the impartial discussion of technical groups should influence school boards and public alike. Ventilation is always a local problem, subject to scientific solution. Whatever is finally determined upon as conducive to health, engineering skill plus popular education can bring about.

Costs of ventilation equipment are important considerations, but costs are relative. If cost is commensurate with service, or if the child's health is in the balance, we can only require that the outlay be consistent. Engineering standards make no virtue of the mere fact of low expenditure. It is economy plus efficiency which counts. It is somewhat beside the mark to compare costs between an efficient mechanical system with fixed load, capable of precise, central, automatic control, independent of outside climatic conditions, with window gravity ventilation, never measurable, never predictable, and never centrally operated. This is especially true when the provision of open windows and gravity exhaust for classrooms does not obviate the necessity of independent mechanical systems for air removal and air renewal in toilets, laboratories, kitchens, and cafeterias. If air filters are utilized in connection with open windows, comparisons would be still more misleading.

Comparison of Costs

"A specific cost comparison between mechanical- and window-ventilation systems as applicable to a modern elementary-school plant at Greenfield, Ohio, is set forth in Table 1. On February 20, 1925, an eight-hour test of the heating and ventilating system in this building was carried on from 8 o'clock in the morning till 4 o'clock in the afternoon. The building has a capacity of 1,250 pupils and is organized on the platoon plan. The average outside temperature was 22 deg. fahr. Room temperatures were maintained in all the rooms throughout the test ranging from 68 to 70 deg. fahr. making an average of 69 deg. The outside relative humidity was 31. The relative humidity in the classrooms was 40 to 43, an average of 41.5. The average velocity of the air entering the rooms through the diffusers was 269 ft. per minute and the class

TABLE 1. COMPARING COST RELATIONSHIPS BETWEEN MECHANICAL AND WINDOW VENTILATION IN TYPICAL CLASSROOM UNIT OF FORTY PUPILS

Classroom Unit	Mechanical Ventilation	Window Ventilation	Percentage Gain or Loss
Cubic Content	22x32x13=9152′	24x40x13=12,480′	+36.2%
Air Supplied C. F.	1200	800	—33.3%
Window Area—Glass	141 sq. ft.	192 sq. ft.	+36.2%
Amount of Radiation (average 3 floors)	123.33 sq. ft.	426.33 sq. ft.	+ 240%
TOTAL BUILDING RESULTS:			
Cubic Content	1,019,843	1,127,253	+122,250 cu. ft. or 9.85%
Cost per Pupil	$244.76	$267.41	+$22.65, 9.25%
Total Building Cost	$305,952.90	$334,269.88	+$28,316.98 or 9.25%

Pipe + Acid = Junk

As soon as acid comes in contact with ordinary pipe, the latter starts on its way to the junk pile. Not that the pipe isn't good, but it is not made to carry acid waste.

On the other hand, Duriron (an acid-proof cast alloy that is no more affected by acids than other materials are affected by pure water) is made especially for this corrosive service.

Duriron's first cost is higher than ordinary drain pipe but its first cost is final.

When Duriron drain pipe is installed to carry school laboratory acid waste, it may be located anywhere in the building. It will protect the school from damage to structure, and will guard against unhealthful conditions, due to leaking drainage, as long as it shall stand.

Duriron is produced only by

The DURIRON COMPANY
DAYTON · OHIO

air changes were 8.25 per hour. This represents about a 100 per cent performance.

"A typical classroom accommodating 40 pupils under window ventilation would require 12,480 cu. ft., which represents an excess of 36.2 per cent over the 9,152 cu. ft. content which is ample under mechanical ventilation. The window area required is 192 sq. ft. under window ventilation, or 36.2 per cent more than the 141 sq. ft. found requisite under the mechanical system. The air supply under window ventilation shows the ratio of 800:1200, or one third less than the mechanical load. Roughly, then the expenditure under the self-styled "natural" system of ventilation is one third more and the air supply one third less than that assured under a controlled system. This takes no account of the absolute failure of open windows as ventilators if climatic conditions or orientation are not favorable and the fact that radiation under the window-gravity phase will average 426⅓ sq. ft. on the three floors of the Greenfield Elementary School as against 123⅓ sq. ft. under the mechanical plan. This represents an excess of about 240 per cent in radiation.

"The dollars and cents costs of excess fuel for maintenance would depend, of course, upon seasonal requirements and the efficiency of the maintenance engineer. It would run into a large sum annually. The total building results under window ventilation show an excess in cubic contents of 122,250 cu. ft., or practically 10 per cent. The cost per pupil would be $22.65 in excess of the mechanical installation, or 9.25 per cent, and the total additional cost of building involved in the problematical window arrangement would be $28,316.98, or about ten per cent. *Apparently much proof needs to be forthcoming to substantiate the statements of window-gravity vent protagonists that the State of New York is wasting millions every year on mechanical ventilation.*

"If in this discussion no pronouncement on absolute standards of air conditioning in schools, has been made it is because the health optimum is still a debatable question. If I have failed to specify what may be regarded as ideal types of installation it is because there is no formula to offer. Every installation presents a new and individual problem. Only study, skill, and engineering conscience can meet the multitudinous requirements involved. When I became official architect of the St. Louis schools in 1897 we had about 1,600 schoolrooms, a large percentage of them dependent upon natural ventilation. If street noises entered the rooms unimpeded; if smoke and gas from industrial processes constituted a nuisance in some locations; if odors from the latrines at times offended school atmospheres; if the windward side was chilled and the lee side stagnant; at least we knew that the school population as a whole was not unfavorably affected by one single set of characteristics. If here and there a teacher became more occupied with her function of teaching than with the health values of ventilation, no one was the wiser and no one weighed the general result. Perhaps the psychology of the open window then as now lulled one in the belief that natural conditions are always right. Central control of ventilation is essential for school efficiency. Hygienic standards now prevail instead of individual notions. Those standards are not static. They are open to revision. School ventilation requirements represent no extremes of air conditioning that are at all formidable to architect or engineer. Efficiency within the full range limits of operation is achieved in all climates and at a minimum cost for the conditions submitted, and performance tests prove the reliability of the ventilating system under competent management. These matters and not controversies pertaining to standardization are the function of the school architect."

Useless Ventilating Devices

W. R. McCornack of Cleveland, Ohio, related the experiences in that city with ventilating systems. The teachers in many instances resorted to the opening of windows claiming that the ventilating systems were inefficient. At first it was believed that the teachers were "temperamental" and unreasonable in their demands, but careful investigation showed that in the main they were correct in their complaints. The ventilating systems were inefficient in operation as well as expensive.

Mr. McCornack said:

"It was quite apparent that some research work should be done to try and remedy a situation which was really deplorable as not only was there friction in the administrative departments of the school system, but the teaching staff was unhappy about the discomfort of their teaching rooms which must have produced a serious effect on their work.

"Then, too, the ventilating equipment was costly, being about 7 per cent of the cost of the building, and it is a well established fact that the expensive ventilation installations are not being operated by many school systems. In fact, Columbia University School of Education sent out a questionary to a selected list of school boards all over the country covering this point and about 55 per cent admitted that they did not operate their ventilating fans at all, and I feel sure many who thought they did—did not, as a later table will show one case where this is true.

"One state-institution director in Ohio recently requested the state architect to omit ventilation from his institution. Upon being told that the state law required it, he said—'Very well, put it in, but we shall never operate it.'

"The other day I visited a college where we were doing some work. I had occasion to discuss the ventilation of the auditorium with the authorities. They said, 'we never use it except at commencement. Then we start the fans and run them a while to blow the dirt out of the ducts, and during commencement we run the fans to stir up the air to help cool the room.'

"The failure to use expensive ventilating equipment is one of the most damaging points against ventilation from the point of view of the layman.

"There was no relief for Cleveland or Ohio on ventilation because we were forced to follow the very obsolete code or have it changed. The code still called for the 30 cu. ft. of air to care for the carbon dioxide content, required so many square and cubic feet per pupil in the room, and prescribed that the air be brought into the room at a point 8 ft. above the floor.

"By this time most of us in Cleveland who were students of schoolhousing were ready to fight for an elastic state code, which would permit other methods of ventilation. To make a long story short this was done and the restrictions on the number of cubic feet of space per child in each room was eliminated and the exact location of the source of admission of the air was also eliminated. This, of course, permitted the installation of the so-called unit systems. The result has been a lowering of ventilation costs."

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SCHOOL ADMINISTRATION NOTES

—The annual report of the New Jersey Commissioner of Education for 1925-1926 shows that the total enrollment of pupils in all departments of the public schools for the year 1925-1926 was 744,266. This was an increase of 17,656 pupils in day schools. A total of 24,405 teachers were required to instruct 744,266 pupils. The children were housed in 2,240 buildings, which was an increase of fifteen over the previous year. A total of 45,900 children were transported to school at public expense because there were no schools suitable in their own neighborhood.

The total expenses of operating the schools were $76,034,726. Of this amount, current expenses amounted to $57,111,204. The cost of repairs and replacements in school buildings amounted to $18,923,522.

Of the total number of pupils in the schools, namely, 744,266, there were 23,920 in evening schools, and 720,346 in day schools. The total number of pupils in grades five to eight was 232,166. The total number in the high schools was 90,306, which was an increase of 3,421 over the year before.

The average daily attendance in day schools was 586,823, or an increase of 12,837. The average absence of pupils was thirteen days.

—A new system of child accounting went into effect in the state of Michigan in September last. The new system greatly increased the work of the school offices since new blanks went into effect requiring a large amount of work upon the part of clerks and principals. The work of the directors of attendance was also greatly increased due to the fact that the school census had to be put on new census cards. The new system has made necessary in many cases a redistricting of cities into smaller units and a shifting of the census sheets to conform to the new census subdivision.

—Fifteen hundred pupils in the Haverhill, Mass., high school were notified by the principal that the practice of chewing gum would be banned as "the most repulsive and filthiest habit."

—The United States Bureau of Education has presented the results of a questionary submitted to superintendents of schools in cities of more than 10,000 population. A summary is given of classification in cities of 10,000 to 30,000 population. Of 163 cities of the size reporting, 145 have adopted the plan of dividing some of the pupils into ability groups. Of the 163 cities reporting, 119 classify some or all of the junior high-school pupils into ability groups, and 81 classify some or all of the senior or regular four-year high-school pupils according to ability.

The bases used for classification purposes in thirty of the cities of 10,000 to 20,000 population are intelligence quotient, mental age, educational age, and teacher's judgment. In other cities there are various combinations of bases, as intelligence quotient and teacher's judgment, or intelligence quotient and educational age. The teacher's judgment is one of the bases used in 133 of the cities reporting, intelligence quotient in 106, mental age in 41, and educational age in 45 cities.

Of 280 superintendents in cities of 10,000 or more population reporting, 44 replied that they are using the Dalton plan or some modification of it. Forty-two superintendents replied that they are using the Winnetka technic or an adaptation of it.

—Miss Lois Randolph, who recently entered upon her term as state superintendent of public instruction of New Mexico, has proposed a new textbook law for the state. The lack of the law, the superintendent declared, is responsible for many parents helping their children evade compulsory school attendance, because they cannot afford to buy books. She favors a property tax to provide the necessary funds.

—William Robenort, a newly appointed district superintendent of the New York City schools, was tendered a testimonial dinner by the faculty of the junior high school 55 of which he was a former member. Supt. Joseph Wade of Districts 19 and 20 was the toastmaster.

—The State Aid Bill (House Bill No. 9) recently passed both houses of the Oklahoma state legislature with a large vote in its favor. The law will provide a fund of $1,500,000 for the aid of weak schools. Under the law the fund may be used in cases where schools are forced to close because of a lack of funds. It may not be used to pay debts or to do other things which are not essential to keeping open the schools to the end of the year.

Governor Harry F. Byrd, of Virginia, has called a special session of the state legislature to consider several constitutional changes. Specific recommendations for changes to affect the administration of the public educational system of the state are proposed. These changes as outlined by Mr. Harris Hart, state superintendent of public instruction, may be summarized as follows:

1. A state board of education appointed by the governor.
2. A state superintendent with minimum qualifications appointed by the state board.
3. A local county school board to be elected by the people or a local commission to be elected by the people to exercise the present functions of the school board and the board of supervisors.
4. A county superintendent to be appointed by the local board from a list of eligibles furnished by the state board of education.
5. Distribution of state funds on the basis of one third on school enrollment, one third on school attendance, and one third on the basis of equalization standards to be set up by the state board.
6. The elimination of the district tax and the establishment of a county-wide tax for school purposes to be used in establishing and maintaining schools.

The Virginia Education Association has also presented its recommendations. They are the same as those made by Mr. Hart in all essential features with the following exceptions:

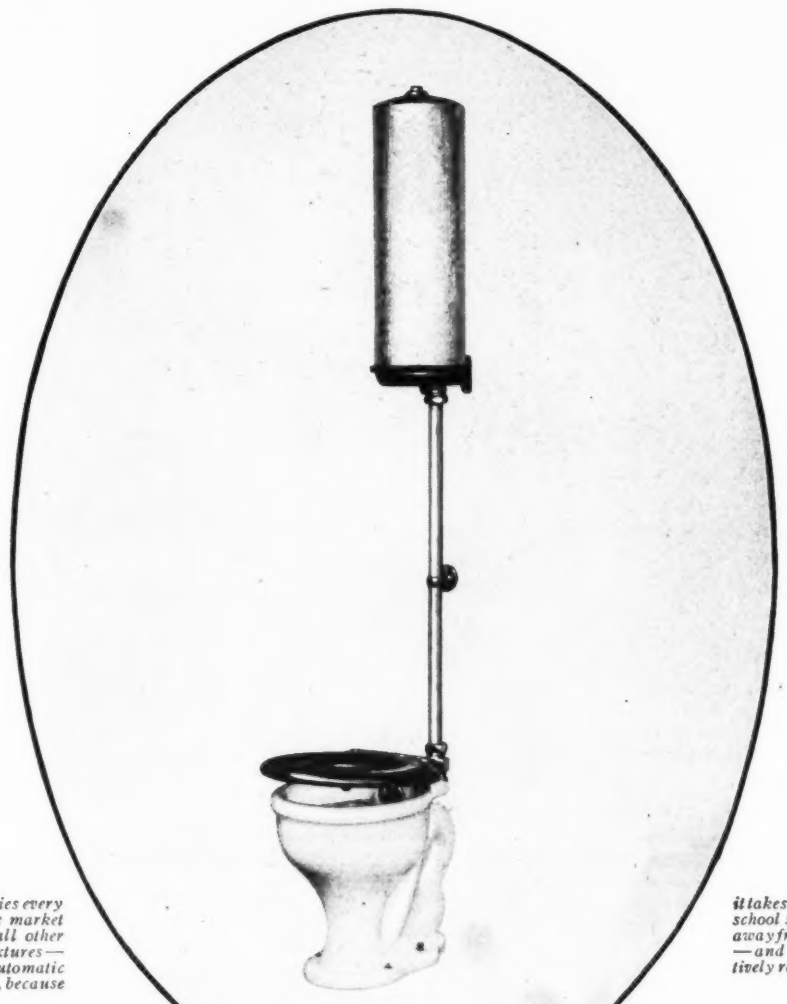
1. That the state board be purely a lay board.
2. That the local boards of trustees be elected by the people and that these boards have power to levy taxes under statutory limitations.

The State Board of Education of Virginia has inaugurated a division of research for the schools of the state. M. L. Combs, formerly supervisor of high schools in Virginia and for eighteen months doing graduate work at Harvard University, will be at the head of the new department. The finances for work have been provided by the General Education Board of New York.

—Owing to a shortage of funds the school board of Billings, Montana, decided to close the kindergarten for the balance of the school term unless tuition fees aggregating $600 were raised. The response was too meagre to warrant continuation.

—A schoolhouse on wheels has been inaugurated by the Canadian Pacific Railway. The car which is equipped with 50 school desks and all the classroom paraphernalia goes to all towns on the line. The teacher who lives in the car all year round provides enough home instruction to keep the pupils busy until he comes around again.

(Concluded on Page 146)



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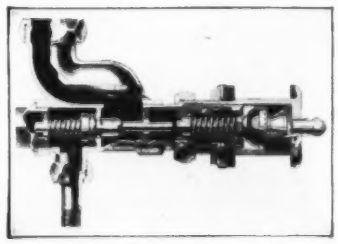
There are but two moving parts in the entire assembly—which explains such service records as the one of 39 years in a Peoria, Illinois, School.



Sectional view, Madden valve—but two moving parts.

And Remember: The Clow-Madden does not trust childish memories. Every time it is used, it scours its bowl automatically from rim to trap—as no other closet can.

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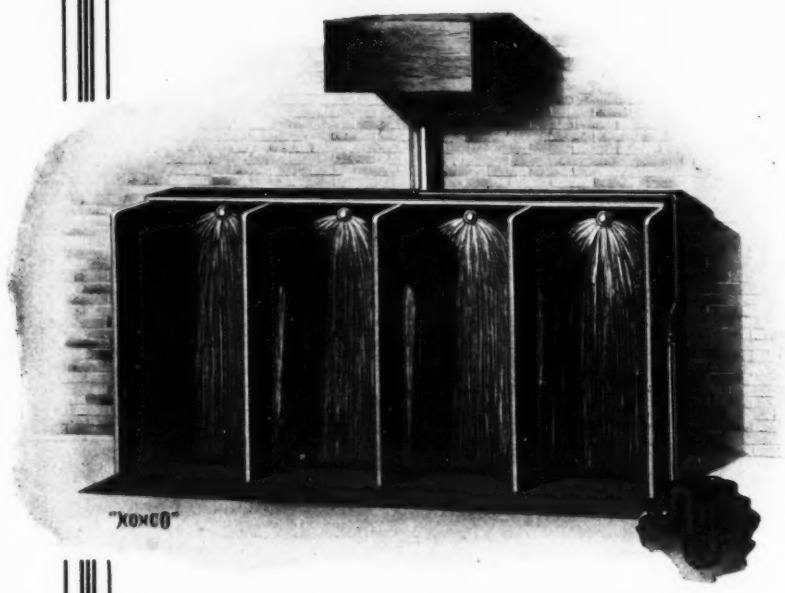

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(Concluded from Page 144)

—The school board of Owosso, Mich., has found it expedient to rent ground space near some of its schoolhouse property for parking purposes.

—The total number of people, according to the 1920 census, above the age of ten in this country who cannot write in any language is 4,931,905. In comment on this fact the United States chamber of commerce says: There are three outstanding causes of illiteracy in the United States, namely: 1. Inadequate schools. 2. Inadequate or unenforced attendance laws. 3. Immigration. The illiteracy problem embraces two parts,—adult illiteracy, and minor illiteracy. The principal solutions of the problem of minor illiteracy are adequate school facilities and proper school attendance laws properly enforced. Every state in the Union now has some sort of compulsory school attendance law. In some states these are inadequate and in many states they are not vigorously enforced. For proper enforcement of attendance laws an adequate census is necessary in order to determine who are subject to these laws.

—The problem of objective rating of teachers is to be made a research contest by the Pennsylvania State Education Association. The award is to be made December, 1928. All persons contemplating comprehensive research in the field of measuring teaching efficiency, and who are willing that their work compete for this recognition, are urged to communicate with the Research Secretary of the P.S.E.A., 400 North Third Street, Harrisburg, Pa.

—The Arkansas Valley High School League, organized in the spring of 1925, seeks to secure the stimulation, the organization, the regulation, and the promotion of interscholastic activities and contests as provided in the by-laws of the organization.

The organization is represented by the high schools of Arkansas City, El Dorado, Hutchinson, Kingman, Newton, Wellington, Wichita, and Winfield, Kansas, and represents a total membership of 5,830 students. The organization has a definite plan of competitive activities in operation and the students participate in a wide variety of high-class athletic affairs.

—The fourteenth annual Pennsylvania Schoolmen's Week will be held March 30-April 2, at Philadelphia, Pa.

—Owing to the increase in the period of school attendance the average American now has a tenth-grade education, according to a preliminary report of the Committee of History Teaching in the Schools, of the American Historical Association. It was long a commonplace to speak of our citizens as equipped with an average education of the sixth grade. The report declared that the social maturity of school children now is far in advance of their physical and mental development, owing to the shift of population from rural to urban centers.

—The new Western Hills High School just completed at Cincinnati, Ohio, will bear eight window tablets in which the following names are recognized: Abraham Lincoln, George Washington, Thomas Jefferson, Benjamin Franklin; Florence Nightingale, war nurse; Louis Pasteur, father of medicine; Gutenberg, inventor of printing; and Socrates, philosopher.

The Maintenance of School Desks

The St. Louis board of education has recently conducted a study of the cost of maintaining school desks. Mr. R. M. Milligan, Commissioner of School Buildings, has found that the St. Louis schools have in service 75,000 fixed pupils' desks and nearly 21,000 movable pupils' desks. It has been found that the cost of repairing movable desks has been $1.37 and the cost of repairing fixed desks has been 83 cents during the year 1926. Mr. Milligan calls attention to the fact that the movable desks were purchased after the year 1916 and that all of the fixed desks were purchased before 1916. He declares that it would be impossible to fix a more accurate and definite cost of maintenance at this time.

Summer Schools Advantageous to Children

Advantage of preliminary tests as a requirement for admission to advanced work in summer school, instead of taking pupils on recommendation of teachers, has been demonstrated in two years' experience in Baltimore, Md. Of 1,682 pupils attempting advance work during the past summer, 86.8 per cent were successful; and of 4,023 attempting review work, 73.9 per cent were successful. In spite of heat and humidity, attendance of pupils reached 93.9 per cent.

Bipartisan School Board for Bridgeport?

A return to the bipartisan method of school-board organization whereby three Democrats and three Republicans are chosen is suggested at Bridgeport, Conn., to be brought about through a charter amendment. The attorney for the board explains that "up to 1921, when the charter was amended, the board was bipartisan in its makeup and consisted of 12 members, six Republicans and an equal number of Democrats. Each party nominated two candidates and a voter could cast his ballot for only two. That meant a nomination was equivalent to election for all four nominees became board members.

"The amendment now proposed provides that each party shall nominate one candidate annually, each voter shall vote for only one, and the two candidates of the major parties shall become board members.

"The purpose of this change is to take politics out of the school system, if we can. In the days of the bipartisan system we did not have the politics that we have today in the department. I am not criticizing any particular condition or individual, but I believe that it would be better to have things the way they were before."

Wisconsin's School Problem

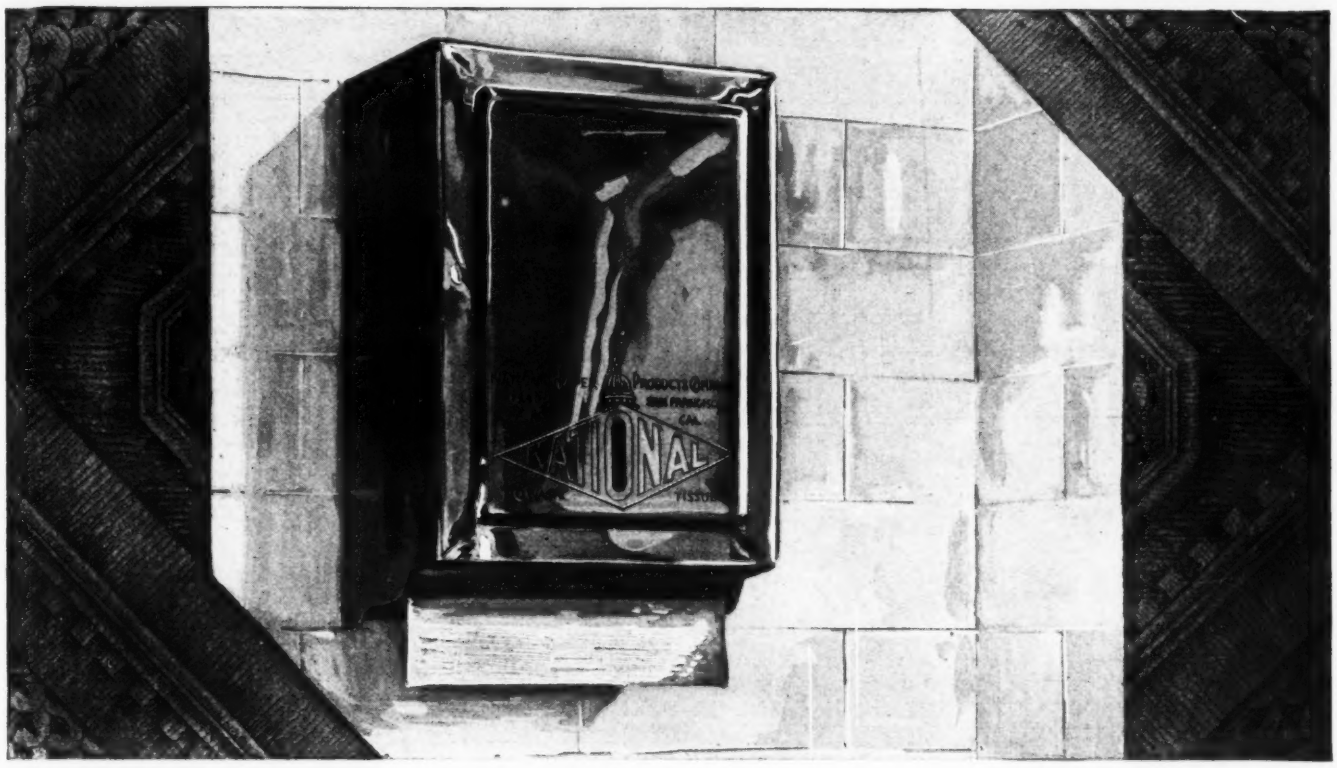
The legislature of Wisconsin is wrestling with the problem of adequate state school support. The state department urges more support for the high schools. State Superintendent John Callahan, in a report to the legislature, says:

"In a recent 10-year period, the number of high schools in the state increased 23 per cent, the total enrollment of pupils increased 23 per cent, and the number of graduates per year increased 115 per cent, while the annual cost of instruction mounted more than 250 per cent. The increase in the number of high-school teachers employed during the same period was 61 per cent.

"One quarter of the districts have a real valuation of less than $12,000 per pupil for taxation purposes. Another quarter have over $30,000 valuation per pupil. These figures show the wide variation in the ability of districts to support their schools by local taxation.

"A third of Wisconsin's schools have a per pupil cost of instruction of less than $80 per year. Twelve and one-half per cent have an annual per pupil cost of over $120. The variation is from $50 to $150.

"Seventeen per cent of Wisconsin's high schools have 15 or less pupils per teacher. Ten per cent have 25 or more. Between 19 and 20 per cent of the land area of Wisconsin is included within its high-school districts. More than 80 per cent of the state's area is outside of any district. In the southern section of the state the percentage of area within high-school districts is still smaller, being less than 14 per cent for two southern rows of counties."



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AN IMPROVEMENT IN SCHOOL SURVEY MAPS

(Concluded from Page 67)

for satisfactory buildings not adapted to enlargement were drawn so as to fill these buildings to normal capacity. (2) Lines between new buildings and satisfactory buildings adapted to enlargement were drawn, where practicable, so as to avoid the necessity of making enlargements and to keep the present buildings filled to normal capacity. (3) Lines between satisfactory buildings adapted to enlargement were drawn so as to avoid more than one enlargement. (4) Where none of the considerations named existed, an approximately equal division of the overlapping territory was made.

The boundary lines finally agreed upon are shown in Fig. 7. The size of new buildings and enlargements was determined by a pupil count in these areas and the predicted rate of growth. The short lines drawn at right angles to the boundary lines show where boundaries may be shifted without forcing children to walk more than ten blocks. If these short lines cross the boundary line, this boundary may be shifted in either direction. If drawn only on one side of the boundary line, the boundary may be moved only in the direction of the lines. The numbers represent the number of elementary school pupils in each unit at the time of the survey. The shaded portions represent parked areas.

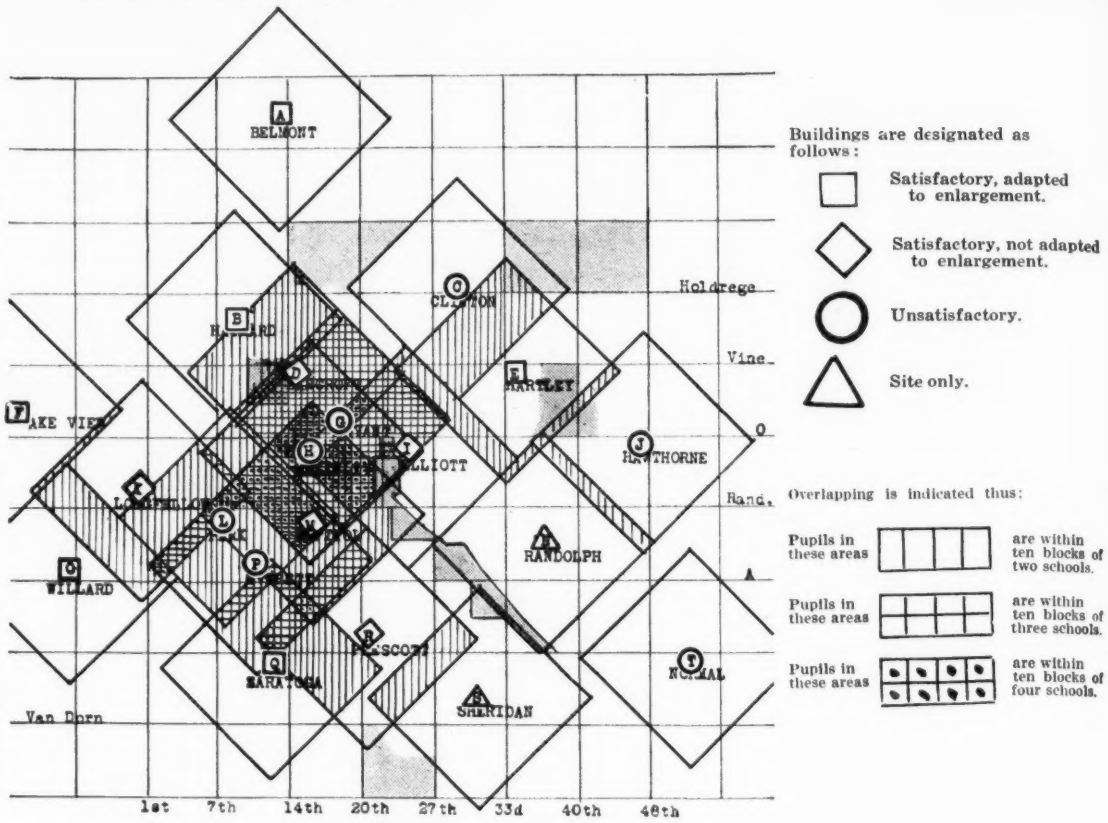


FIGURE 5.
ELEMENTARY SCHOOLS AND SCHOOL SITES AT TIME OF SURVEY SHOWING OVERLAPPING.

While the primary purpose of this article is to describe a method, a word about the building program may be permissible. The secondary plant will consist of a senior high school and three junior high school buildings, all built since 1914. The condition with reference to elementary school buildings may be understood by reference to Fig. 7. As indicated in the legend to Fig. 5, buildings designated by squares (in either position) are satisfactory. Seven have been built since 1914 and three have been thoroughly remodeled and modernized during the same period. Enlargements have been made at B and E and new buildings completed at C. N, and S since the survey. A new building is under construction at L and plans are ready for one at J. When this program is completed in 1927, the elementary school plant will consist of twelve Type B buildings built within the past twelve years, and three buildings remodeled and modernized within this same period. One Type D building will remain at T for a time. It will then be replaced by a new one at U. Six buildings will have a capacity of 800 to 1,200. Two buildings, B and N, each with a capacity of 800 to 1,200, will probably not be enlarged, as little or no growth is predicted in the areas served by these buildings. The remaining areas are large enough to develop in time a pupil population of 800 to 1,200. The buildings are of unit construction. Boundary lines for all districts are flexible on at least one side. Enlargements may be made as needed and by readjustment of boundary lines buildings kept filled to their normal capacity.

The oblique-line method of plotting boundaries in a survey map has the following advantages over the circle method where the street system is rectangular.

1. The oblique-line method describes accurately all of the territory within the maximum walking distance from a given center. The circle either includes territory beyond the maximum distance, or fails to include territory within this distance.

2. The oblique-line method describes all of the overlapping territory in which boundaries may be shifted, or transfers made, as conditions change. It is impossible to indicate overlapping accurately by the circle method.

3. The oblique-line method projects a theoretical boundary which approximates far more closely the boundary actually drawn than any projected by the circle method.

4. These advantages have been illustrated in a generalized situation and in their application to an actual school building survey.

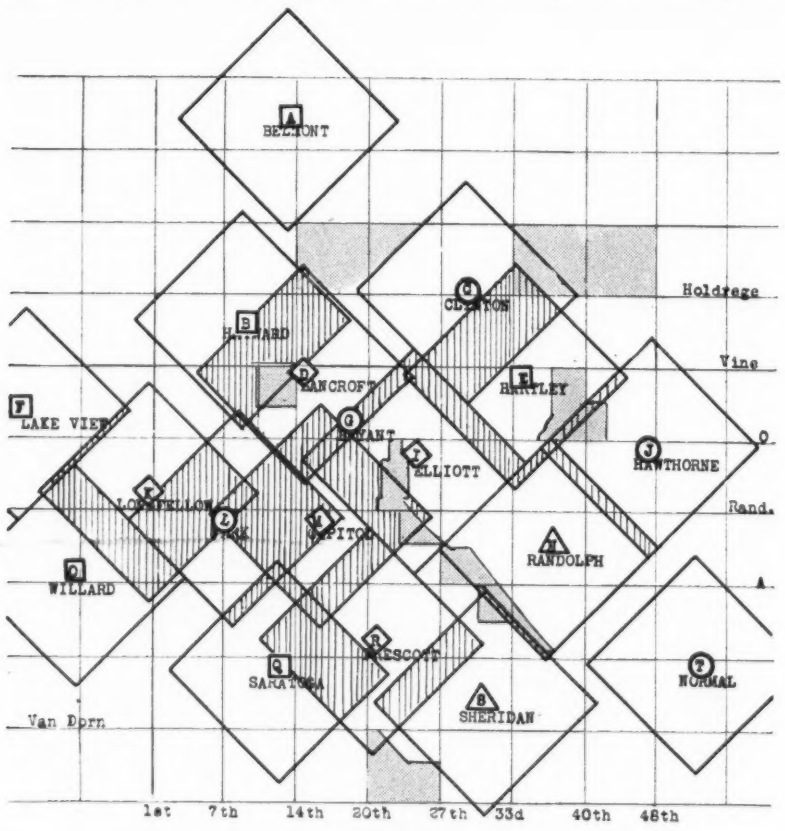


FIGURE 6.
OVERLAPPING EXISTING AFTER ABANDONMENT OF THREE SCHOOLS.
The schools to be abandoned are G, H, and P in Figure 4. School G is shown on this map because it is not scheduled for immediate abandonment. The area to be served is shown as merged with school D. Symbols are the same as in Figure 4.

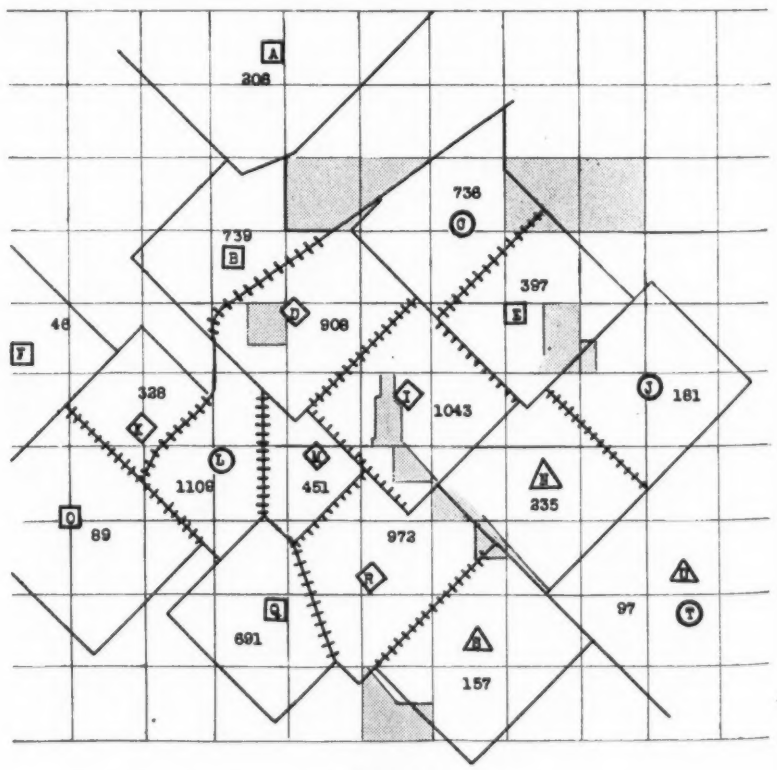
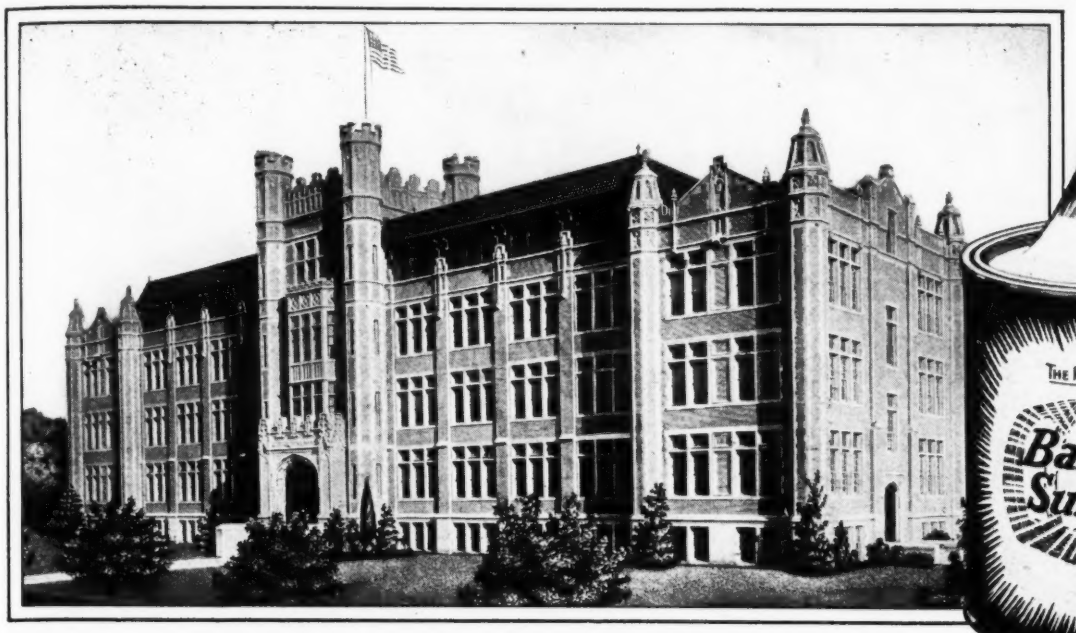
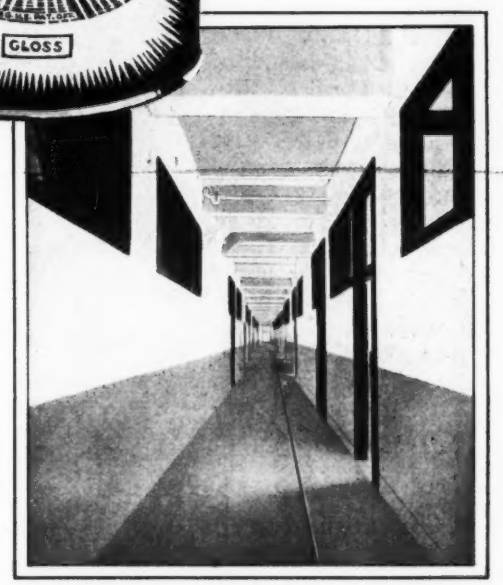


FIGURE 7.
DISTRICT BOUNDARY LINES AS ACTUALLY DRAWN.
All schools designated by circles have been or are to be replaced by new ones. The school at T is to be moved to the site at U. New buildings have been erected on sites N and S. Figures show the number of pupils in these areas at the time of the survey. The short lines drawn at right angles to the boundary lines indicate that these boundaries may be shifted without requiring the pupils to walk more than ten blocks.



Over 2,000 gallons of Barreled Sunlight, white and tinted, was used to paint the interior of this handsome building of the Woman's Institute of Domestic Arts and Sciences, Inc., at Scranton, Pa.



Lasting cleanliness and better light—when walls and woodwork are painted with lustrous, washable Barreled Sunlight!

This clean, handsome, durable finish

for school interior use — in white or easily tinted

PAINTING school walls and woodwork with Barreled Sunlight is the modern way to insure lasting cleanliness and better light.

Three different finishes—all easily tinted—make this famous product available for every interior job.

Most practical for places that require maximum light and sanitary cleanliness is Barreled Sunlight Gloss. Its lustrous surface is so satin-smooth it washes like tile, and so durable that repeated washings will not injure it. Handsome as the finest enamel, it costs less and requires fewer coats.

* * *

Where less than a full gloss is required, the logical choice is Barreled Sunlight Semi-Gloss, an unusual combination of good looks and ease of maintenance.

And for the duller effect sometimes preferred on walls of well-lighted rooms, Barreled Sunlight Flat finish is ideal. This, too, is washable—though naturally less durable under constant washing than the Gloss or Semi-Gloss.

BARRELED SUNLIGHT "covers" so well, and flows on so easily with brush or spray, that it does the complete job at the *lowest cost per square foot of surface covered.*

Sold in 55- and 30-gallon churn-equipped steel drums, and in 5- and 1-gallon cans. Where more than one coat is required, use Barreled Sunlight Undercoat first.

There is a local distributor of Barreled Sunlight in all principal cities.

Use the coupon to obtain further information and a sample panel painted with Barreled Sunlight.

U. S. GUTTA PERCHA PAINT CO.
Factory and Main Offices
44 Dudley Street, Providence, R. I.
New York—350 Madison Avenue
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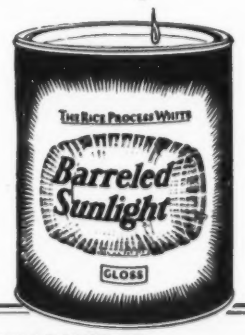
San Francisco—156 Eddy Street
Distributors in all principal cities
Retailed by over 6,000 dealers

Barreled Sunlight

Reg. U. S. Pat. Off.

Easy to Tint any Shade

Barreled Sunlight, an all-oil product, is easy to tint any desired shade by simply adding ordinary colors-in-oil, or by using the new Barreled Sunlight Tinting Colors. In quantities of 5 gallons or over, Barreled Sunlight is tinted at the factory, without extra charge.



U. S. GUTTA PERCHA PAINT CO.,
44 Dudley Street, Providence, R. I.

Please send me descriptive literature and sample panel painted with Barreled Sunlight. I am interested in the finish checked here—

Gloss ( ) Semi-Gloss ( ) Flat ( )

Name .....

Street .....

City ..... State .....

The Ideal Installation for Schools

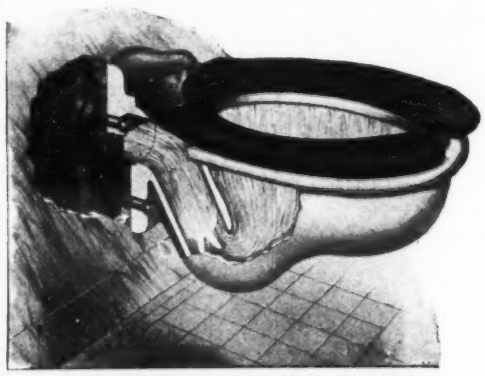
Watrous

Flush Valves and Duojet Closets

More Sanitary—More Economical
Clogging and Overflowing Avoided

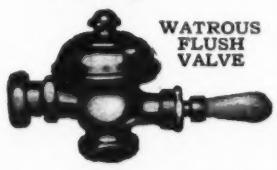
IN the Watrous Duojet Closet there are special safeguards against the danger of a choked outlet. Also, the bowl is very economical with water. It eliminates the narrow outlet which is needed beyond the trap in most single-jet bowls to maintain syphonic action, but which often occasions clogging, overflowing, and heavy repair bills. Two powerful converging jets effect a thorough flush, at a far lower water-consumption than is required by the majority of single-jet types.

WATROUS DUOJET FLOOR CLOSET



WATROUS DUOJET WALL CLOSET

The wall type of bowl, as it does not rest on the floor, greatly simplifies the work of cleansing the toilet room, and by dispensing with furred ceilings and closet connections in floors it promotes economy and speed in the erection of new buildings.



WATROUS FLUSH VALVE

The Watrous Flush Valve delivers the exact quantity of water required for a thorough flush by the make of closet bowl with which it is used. Therefore, when installed with the water-saving Duojet bowl, it makes possible substantial annual economies that may be added to the saving afforded by the non-clogging feature. The Watrous valve requires no regulation for varying water pressure, from lowest to highest.

The Watrous line includes several models in which the flushing is effected by automatic seat-action. Among these is the "Juvenile" type, with a bowl of less than normal height, suitable for small children.

Write for details on the Watrous Flush Valves & Duojet Closets

PLUMBING DIVISION

Watrous Flush Valves, Duojet Closets, Self-Closing Basin Cocks, Combination Lavatory Fixtures, Pop-Up Wastes, Liquid Soap Fixtures, Etc.

Sold by Leading Plumbing Jobbers Throughout the U. S.

THE IMPERIAL BRASS MFG. CO.

521 South Racine Avenue, CHICAGO

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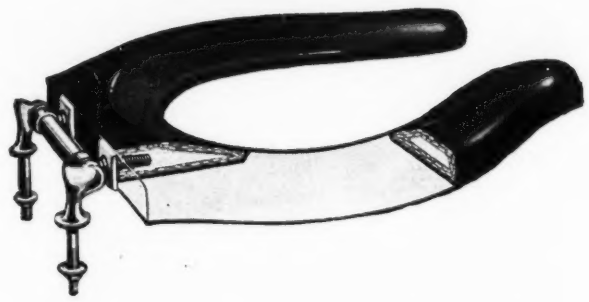
Evernu
Everlasting Hard Rubber
Seats
Patented



They'll Still Be Just Like New 30 Years From Now

Evernu toilet seats simply cannot wear out or become shabby looking. They are molded in one piece of hard rubber by the patented Evernu process which makes them practically indestructible.

That's the reason they are so widely chosen for original and replacement installation in schools. There's no end to their economy.

Then, too, as a sanitary measure the installation of Evernu seats is worth considering. The smooth, seamless surface may be cleansed easily with alcohol. It is guaranteed not to warp, chip or crack.

And, best of all, you can have all these Evernu advantages for no more than you would pay for ordinary seats. Have your architect specify Evernu.

Important Public School Installations of Evernu Seats Include Those at:

Chicago, Ill.
New York, N. Y.
Los Angeles, Calif.
San Francisco, Calif.
Indianapolis, Ind.
Evansville, Ind.
Harrisburg, Pa.
Kansas City, Mo.
Seattle, Wash.
Baton Rouge, La.
Tacoma, Wash.
Philadelphia, Pa.
Cleveland, Ohio.
Mobile, Ala.
Dallas, Texas.
Shreveport, La.
Pine Bluff, Ark.
Eugene, Oregon.
Long Beach, Calif.
Pasadena, Calif.
South Bend, Ind.
Columbia, S. C.
Terre Haute, Ind.
Baltimore, Md.
Dayton, Ohio.
Cincinnati, Ohio.
Oakland, Calif.
Amarillo, Texas.
Richmond, Va.
Toledo, Ohio.
San Antonio, Texas.
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St. Joseph, Mo.
Salem, Oregon.
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The Never Split Seat Company

Founded 1905 Dept. 133, Evansville, Ind., U. S. A.

The Largest Manufacturers of Toilet Seats in the World

"Drink More Water"

Medical authorities agree that children should drink more water." This helps to keep their active bodies in better health. Pure, fresh water is essential and for this reason schools everywhere have installed R-S Vertico-Slant Fountains.

With the average fountain children are apt to place their lips on the "bubbler head" and spread contagion. This is **impossible** with R-S Vertico-Slant Fountains **because lips can't touch the nozzle.** The stream of water is situated just right for convenient drinking. It is essentially a germ-proof fountain installed at moderate cost.

R-S Drinking Fountains come in complete range of sizes and models for every school requirement. Write for illustrated Catalog with full information on the R-S line. It will be gladly sent upon request.

RUNDLE-SPENCE MFG. CO.
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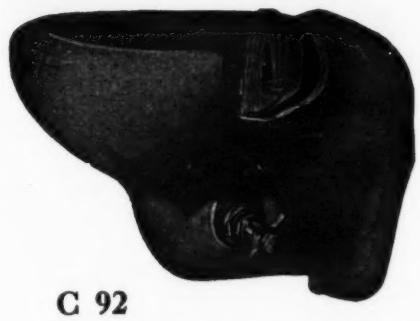
RUNDLE-SPENCE



C 92

Handsome vitreous china one piece fountain. Combines all the conveniences of the vertical stream with the special slanting stream feature. Glass or cup may easily be filled from it.

C 147

A pedestal fixture of galvanized pipe with extra heavy vitreous China bowl and vertico-slant stream. An extra strong fountain for the playground.

SOME RECENT ILLINOIS SCHOOL BUILDINGS

(Concluded from Page 60)

The heating and ventilating of this school is accomplished by the furnace blast system. Large volumes of air are blown over four horizontal air-tube heaters, the air entering the classrooms at a point 8′ above the floor and being removed through vents at the floor line. No radiators appear in the building. The temperatures of the rooms as well as the humidity are automatically controlled.

Contracts for the building were as follows:

General contract	$ 96,000.00
Plumbing	7,360.38
Electric work	5,258.00
Heating and ventilating	12,500.00
Total, exclusive of equipment and architect's fee	$121,118.38

Based on a total cubage of 611,988 cubic feet, the building cost 19.8 cents per cubic foot, or $222 per pupil.

The exterior is dignified in its Georgian style. The red brick walls are laid up in white mortar and trimmed with Indiana limestone. The windows have rolled-steel sash of the reversible type.

The Chester High School

The new high school at Chester, Illinois, was erected in 1926 to accommodate 400 pupils. The building has been planned to include a gymnasium and auditorium at the rear, but the board of education has for the present omitted these two rooms which are to be erected at a later date.

The building is constructed of dark red brick of rough texture, laid with light-colored mortar joints. The trim is Indiana limestone. All windows are of rolled-steel sash of the reversible type.

On the ground floor are large rooms for bookkeeping and typewriting, a large shop for manual training with drafting room adjoining, a chemical laboratory, boys' and girls' toilets, heater and fuel rooms.

On the first floor are general-science laboratory, domestic-science laboratory, with dining room and pantry adjoining, public and private offices for administration, a sewing room, fitting room and storage, and two recitation rooms.

On the second floor the entire central portion of the building is occupied by a study hall, with windows on both sides. Six recitation rooms, clinic and rest rooms, and teachers' rooms for men and women occupy the rest of this floor.

The corridors and the stairways are of fireproof construction with cement slabs and cement finish floors. The balance of the building is nonfireproof except for the floor slab over the heater room, which is also concrete. The classroom floors are maple; toilet-room floors, cement. All interior is yellow pine, stained. The plumbing is of heavy-duty school type and the toilet partitions are of metal.

The main building contains 370,200 cubic feet, and the costs were as follows:

General contract	$ 72,026.00
Plumbing	6,751.30
Electric work	3,797.00
Heating and ventilating	20,137.00
Total for main building, exclusive of equipment and architect's fee	$102,711.30

As planned, the gymnasium-auditorium will be a combination room with a large stage on one end, and a large bank of bleachers on the other. Locker and shower rooms for boys and girls will be located underneath the bleachers. The cubic content of the gymnasium will be approximately 166,675 cubic feet. It is estimated that, at present costs, the gymnasium including the general contract, plumbing, heating and ventilation, and electrical work, will be $22,000, exclusive of equipment and architect's fees.

When the building is completed, the cost will be approximately $124,700, or 24.7 cents per cubic foot. The unit cost of the main building is 27.6 cents per cubic foot and the gymnasium will be 13.2 cents. The cost will be, therefore, about $256 per pupil.

KEEPING UP-TO-DATE IN SCHOOL ADMINISTRATION

(Concluded from Page 70)

The SCHOOL BOARD JOURNAL is a veritable mine of rich administrative material. Careful reading and note-taking on what appears in it from month to month, if properly filed as outlined here, will soon have at the administrator's elbow just the kind of help he needs in attacking many a perplexing problem. Add to this the half-dozen or more educational periodicals and the dozen or so of books which he should read each year and his notes become of inestimable value to him.

The plan as outlined here is simple, but best of all, it works. Moreover, the very act of taking notes of that which one regards as most worth while compels one to read more carefully and thoughtfully than he would otherwise. The value of the reading is enhanced at the time and is easily renewed at any later time.

New Master Specifications Issued

School authorities will be interested in obtaining the following new circulars of the United States Bureau of Standards on master specifications for materials commonly used in schools. The new publications are:

C-130. U. S. Government Specifications for soap, cake, grit.

C-312. U. S. Master Specifications for rubber matting used around electrical apparatus or circuits, not exceeding 3,000 volts to ground.

C-313. U. S. Government Master Specifications for huck towels, with woven name. Price, 5 cents.

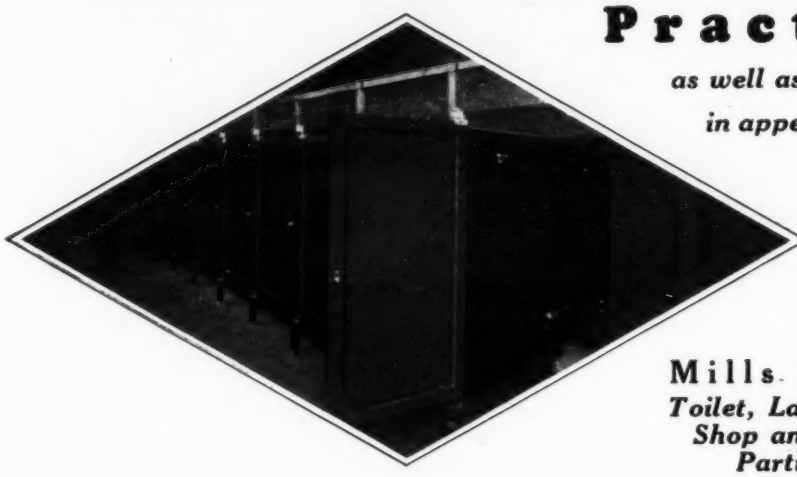
C-315. U. S. Government Master Specifications for soda, caustic (lye), (for cleaning purposes). Price, 5 cents.

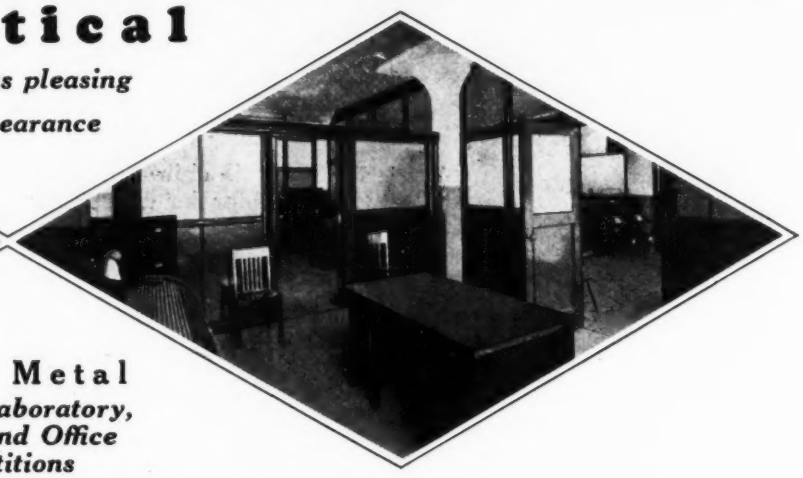
MILLS METAL MILLS METAL MILLS METAL MILLS METAL MILLS METAL MILLS METAL MILLS METAL MILLS METAL MILLS METAL

Practical

as well as pleasing

in appearance





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Toilet, Laboratory, Shop and Office Partitions

Designed Especially for School Requirements

For the Toilet, Shower and Locker Room

You can specify "Mills Metal" knowing that the result will be an installation that will remain in satisfactory condition as long as the building itself.
Abundant strength— Pleasing appearance— Superlatively sanitary.

For the General Office, the Laboratory or Shop

Mills Metal Partitions are designed in various types to meet these particular requirements.
Our new Bulletins fully describing them are now available on request. Send for them and permit our Engineering Department to assist you in your plans.

The Mills Company

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THE PERSONAL-SOCIAL RELATIONSHIPS OF THE SUPERINTENDENT OF SCHOOLS

(Continued from Page 43)

the upbringing of the children of all the people, trades the good will of his friends and patrons for the cheap rewards of winning a political contest. There are so many ways, however, of entrapping a superintendent in community embroilments, that only the wary and experienced escape unscathed.

Every superintendent has embodied somewhere in his philosophy of life certain rule-o'-thumb principles which bear heavily in his thinking. Following are samples of the favorite maxims of nationally known superintendents and public workers:

1. "Every man has his 'handle,' by which he may be controlled. It is often a close relative, his business, or his desire for office or certain property. I study a man until I find the lever which moves him, grab hold, and hang on until something gives."

2. "I keep one ear listening to heavenly music, but the other one on the ground."

3. "Why do I follow the crowd so much? Why, man, I have to. I'm their leader!"

4. "I always feel encouraged when people object to what I'm trying to 'put over.' That's a sign they're interested. If they don't object, I don't have even their interest. If they do, half my job is done for me."

5. "If I have two or three enemies, I figure it is 50-50 their fault and mine. If I have a good many, it is my fault."

6. "People remember you most happily if you are associated with something out of the ordinary which has happened to them. I always offer congratulations when due and condolences when they are welcome. When something good is due somebody else, I enter into a partnership with him to get it."

7. "A heavy turnover of actions will make amends for mistakes. Avoid splitting hairs on theory. Remember the verse:

"A centipede was happy quite
Until the toad for fun
Said, Pray, which leg goes after which?
Which worked her soul to such a pitch
She lay distracted in the ditch
Considering how to run."

Strategy and Conflict

When the critical and all-important moment of man-to-man clash of mind and personality arrives, the fruits of a lifetime of personality development come to harvest. The essence of drama is found in the conflict. A wise superintendent will never go without the utmost preparation to a board, public, or other meeting when issues are to be settled in which he is vitally interested. It will pay him to drop everything else to secure the facts, marshal his arguments, and rehearse his procedure. He will have anticipated the probable course of events during the conference, and settled many points out of court, as it were, before the case comes to trial. A defeat is always unfortunate for him personally; too many defeats, disastrous. A superintendent in an average situation who is always worrying over school petitions, defending himself and his policies against attacks in the press, and pleading for cooperation, is generally lacking in one of the most important traits of an executive, the ability to foresee social reactions and to head off the damaging ones. Napoleon always chose the fields for his winning battles. He had them half won before the fights began.

When the actual moments of human contacts come, the superintendent has the advantage of perhaps more knowledge than anyone else about the subject of conference; he has carefully thought over its probable course and outcome; he has in mind specific impressions he wishes made; he has the understanding and support of allies he has previously converted; his *ipse dixit* and personal prestige should be of considerable weight; and he has the confidence engendered by a knowledge of all these favorable conditions.

But with all these propitious conditions, the progress of the course of events during the settlement of issues by a group mind, is highly uncertain, and never can be fully anticipated beforehand. It must be lived to be appreciated. What the fully made-up mind fretfully regards as unimportant and perhaps freakish points of view are constantly springing up. The superintendent must continually and rapidly adjust himself to whatever befalls. He has a great advantage if he knows the interests and habits of thought of the members of his group. He must find their vulnerable points, and hit hard.

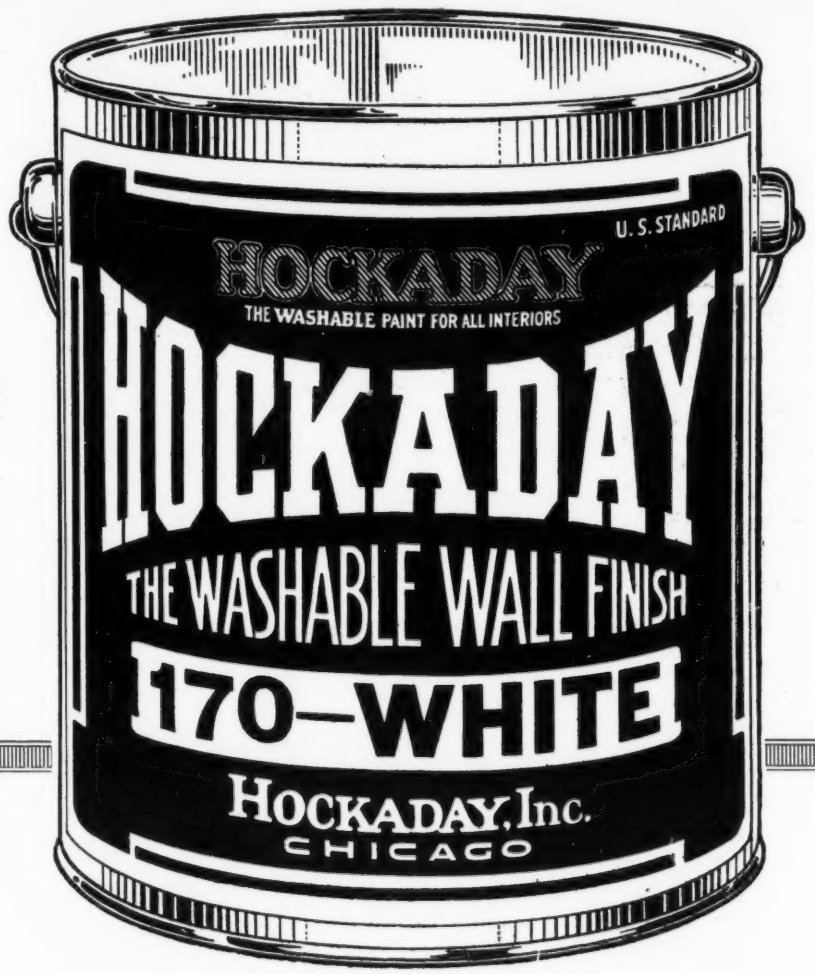
Conflicts of personalities generally have a highly emotional tone, and it is exceedingly dangerous during the modern-day civilized battles of intellect and wits to lose self-control. Whom the gods would destroy they first make mad. The growl of anger has been supplanted in modern days by the soothing words of tactful suggestion. Emotionalized argument is generally a waste of time, and straight-out contradictions inspire later come-backs. It may be necessary to concede cherished points and to compromise in order to achieve a greater gain, but such concessions should be thought out and tentatively planned, and not too hastily undertaken.

Winning and Losing Gracefully

The superintendent would do well to keep the discussion in fields in which he is most informed, and in which he can wage effective battle. He will exercise extreme care in using illustrations from the other man's field of knowledge. His greatest strength is in the cause

(Concluded on Page 154)

The WALLMARK of Quality



A paint you *can* forget, but *don't!*

When Hockaday paint leaves the factory, it does not leave factory supervision. No, sir! Though it is shipped away to distant cities in airtight cans, we follow and make sure of a good paint job.

But—

When Hockaday has been applied, when, according to our specifications, it is on the wall and has hardened with a smooth, egg-shell surface, we forget it!

The story from there on is an old one to us. We know how through the years it will retain its freshness, how with each washing it will shine out again like new, how it will resist lime-burn, checking, cracking and peeling.

Yes, sir, Hockaday is a paint you CAN forget, but one you don't! Only time does.

HOCKADAY, Inc.
1823-1829 CARROLL AVENUE
CHICAGO

The Hockaday Co. of San Francisco
206 Ninth St., San Francisco, Cal.

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420 Douglas Bldg., Los Angeles, Cal.

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HOCKADAY
THE WASHABLE PAINT FOR ALL INTERIORS

WRITE FOR YOUR COPY OF "PAINT MILEAGE"

They Never Wear Out!

Yes, Sir—WEAR PROOF MATS will give you every mat service any other kind of mat will give — and they'll do it better and cheaper because *"They Never Wear Out."*

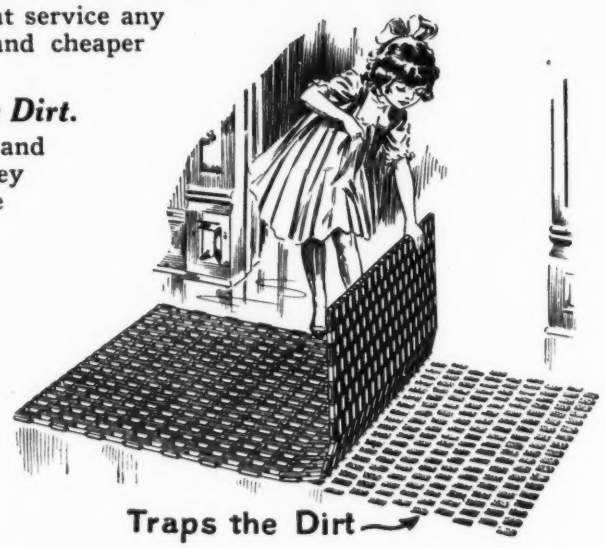
Greater Foot Scraping Surface Catches All The Dirt.

WEAR PROOF MATS have greater scraping surface and dirt-catching capacity than all others. By actual test they are 50 per cent more sure-footed and slip-proof. They are water-proof, germ-proof, and rot-proof. Easy to clean and handle. No beating or pounding to get the dirt out of them. Roll them up and sweep the dirt from under them. Lay them down and they lay flat.

And ***besides*** all this, the first cost of WEAR PROOF MATS is the last cost,—the most economical of all mats to buy because they give everlasting service, satisfaction and WEAR.

Where else can you get all this except in a WEAR PROOF MAT? Why be satisfied with anything less?

Send for the Wear Proof Book which shows how WEAR PROOF MATS will save you money,—give you better, safer mats and everlasting satisfaction.



WEAR-PROOF MAT CO., 2172 Fulton Street, CHICAGO, ILL.

(Concluded from Page 152)

he represents. He must, however, speak in terms of human appeals which he divines to be the most effective with the separate individuals of his group, and he must speak them well. And when the tension becomes too great, the cigars may be passed or a story told.

After the conflict is won, the matter should be clinched by motion or definite understanding or agreement. Parliamentary devices to make the matter unanimous should be employed on occasion, and care taken to soothe the minority. Whenever feasible, the conclusions reached should be put in black and white, and made easily available to all concerned.

The technic of losing gracefully is almost as important as the technic of winning, under certain circumstances. Occasionally a schoolman is found harboring a sort of chronic grouch against the policies or actions of his board or superior officers. He is resentful because he has been unable to gain or to retain their confidence in some measure which he has sponsored or defended. He is prone to circumvent, or even to attack the measures he dislikes. His best procedure by far is to assume an attitude of good sportsmanship, minimize so far as possible the personal nature of his defeat, and express to his superiors his willingness to at least give the matter an honest and fair trial. An executive is not in the business to indulge himself in the luxury of soothing his own personal feelings, but to get results. And people often appreciate as much our cooperation as they do our leadership. Probably no one in town, except his wife, is as much interested in the success of a superintendent as his board of education. Generally a board is about as good a representative body of public opinion as a superintendent has, and if he cannot give them some of the things they want, he had better resign. He is out of harmony with his community; he cannot utilize the most obvious of all his opportunities for working with and thereby eventually directing those groups in whose hands lie the reins of social control.

The Gain in Adjustment

There is no real loss of personality in adjusting to our human environment. On the contrary, only thus are inborn personality traits developed. The apprentice superintendent may have to do a good deal of hard thinking, which is always painful, and he may have a number of rough corners knocked off. Youth may lose some of its bumptiousness. But adjustment is infinitely more significant than merely passive submission. It very often involves also an active, dynamic adjustment which puts a man in the forefront as leader. Men of ability always fill their place in society only by growing. Again, a man out of adjustment during one decade may fill a great need in the life of society down through the centuries.

There is something of the independent spirit of the artist in the heart of every true teacher, and of every great executive. He demands as his most cherished prerogative the right to say: "Behold this piece of work; it was done by me, and done in my own way!" The chief and almost only joy in a teacher's life is this distinctive privilege and reward of the professional man and of the artist. It is the age-old craving for individuality; for self-expression and recognition of personality. And there is a fierce and relentless opposition to the numerous tribe of social propagandists who try to dictate what we shall think, feel, believe, and teach.

An important goal, then, of all social life is the provision of opportunities and safeguards for the maximum of individual self-expression. Some of us, out of adjustment, may suffer denials. But in the long run, we secure our greatest freedom by identifying our interests with those of society. We save our lives by losing them in those of our brethren.

HOW TO JUDGE GOOD VENTILATION

(Concluded from Page 44)

each apparently giving excellent satisfaction, the school board, in the interest of the taxpayers, must decide upon the less expensive one.)

The educational authorities in states having obsolete laws should seek to have these laws changed as soon as possible. A modern law would place the emphasis on temperature, declaring it a punishable offense to allow a schoolroom temperature to exceed 68° F. when a higher temperature is preventable. The state department of health or of education should then add schoolroom temperature inspection to school sanitary inspection.

THE DUTIES OF THE HIGH SCHOOL CLERK

(Concluded from Page 65)

7. Furnish superintendent's office list of graduates 1
8. Prepare annual inventory report and send copy to superintendent's office..... 2

VIII. Miscellaneous:

1. Go to bank.
2. Answer prospective candidates by sending blanks for them to fill.
3. Wait on girls when sick.
4. Excuse pupils on account of illness or other reasons.
5. Reservation of rooms and gymnasiums for outside activities.
6. Keep books and accounts of the school.
7. Keep ledger of invoices received in office, sent to persons concerned for signatures, returned to office, and mailed to stockroom.
8. Keep bulletin book of all bulletins, notices, circulars, etc., sent out through the school each year.
9. Make report of school savings each week.

*Listed under "miscellaneous" in questionaries, but redistributed by author.

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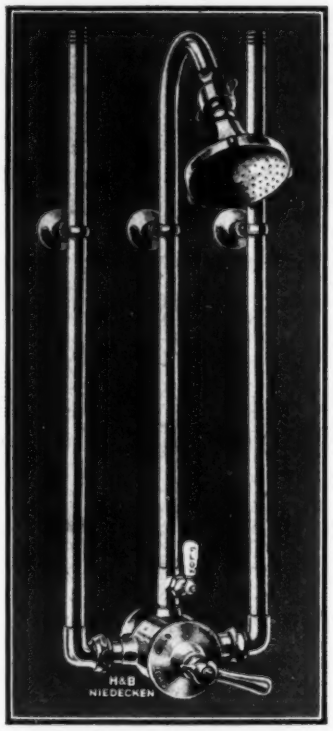

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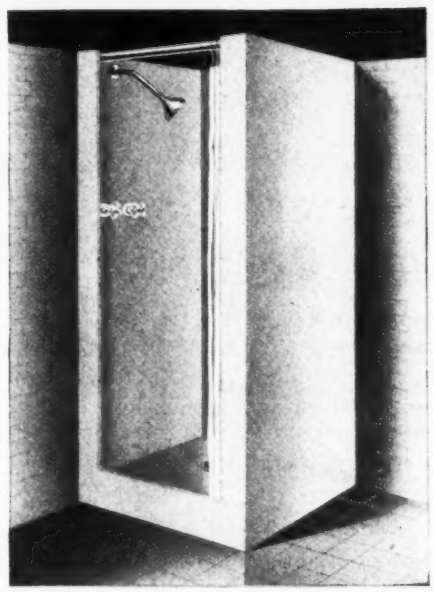

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SUPERVISION—ITS WEAKNESSES AND OPPORTUNITIES

(Concluded from Page 52)

visit the strong teacher, the next best thing is for the supervisor to absorb all the good points he can and pass them on to the others.

The "vertical type" of supervision refers to the observation of one particular subject in a number of grades. Suppose that pedagogical tests have shown that the pupils in a school are below the standard in arithmetic but are entirely abreast of the requirements in other subjects. Evidently something is wrong with the methods of instruction or the material presented in arithmetic. The sensible approach to the problem is to observe the instruction given, not in one grade alone, but in all the arithmetic classes. Where a difficulty of this sort exists, it is well for the supervisor to take the teachers into his confidence, to define the problem for them, and to ask for their cooperation. He can then map out a plan of attack, tell the teachers what particular points he will look for in his observations, ask them to study the problem, and, if a feasible solution is offered, give credit to the teacher who presents the solution.

Community and Human Values

Good supervision can be made a valuable instrument for keeping the public in favorable contact with the schools. The school administrator who does not keep his school system before the people is likely to soon find that the schools are slipping backward in the estimation of his community. The supervisor, who can show definite data, obtained from standardized tests and other authentic means, to indicate the progress made during the year under his supervision, has material well worth publishing in the local newspaper. Statements of the approximate amounts of money saved to the school district by the elimination of retardation are always interesting reading. Standard test data may also be used to show how the schools stand in comparison with other communities throughout the state. These materials may not only be used for publication but as a means of *justification* of the expense of the supervisor's position. In the small city or village where a full-time supervisor is employed, some citizens are constantly asking what this man or woman, who does no regular teaching, does to earn a salary greater than any of the classroom teachers. Here is a logical point of attack on the viewpoint of the would-be economizer. If the supervisor can show that he is definitely valuable in improving instruction, and in addition is actually *saving money* for the schools by preventing repeating, the critics will have little standing in the court of public opinion.

After all is said and done, successful supervision, as well as *good* teaching, depends primarily for success on the personality of the individual. A man may have the best possible background for his work, he may have information and references galore at his tongue's end, but if, by manner or voice or some other characteristic, he cannot win his teachers so that they will *want* to please him and ask for his help, he cannot become a complete success. On the other hand, the man who possesses the characteristics necessary to "get along" with people, who can inspire other people to do better and more efficient work; who understands the practical application of the laws of pedagogy; who has a sense of humor; who recognizes his own shortcomings as well as the weaknesses of others; and who, above all, has that higher, greater vision of the possibilities of his job—this man has almost unlimited opportunities for contributing to the improvement of teaching and teachers, and of helping to lift the profession of teaching to a higher place in the estimation of patrons and citizens.

A STUDY OF IDEAL RELATIONSHIPS BETWEEN SCHOOL BOARDS AND SUPERINTENDENTS

(Continued from Page 51)

tuition and practically all matters relating to existing and proposed buildings appear to be matters of general policy which should be decided by the school board on the recommendation of the superintendent. Probably this is due in great measure to the state laws which require doing just this thing and the inclination of superintendents to have their thinking colored by existing laws. Obviously, too, there must be direct responsibility for these matters in the board of control elected by and responsible to the people. Situations which have to do directly with the instruction of pupils seem to be thought to be matters which should be handled by the superintendent in his own discretion. These matters are the selection and purchase of textbooks and supplies, the transfer and assignment of teachers and other employees, the revision of curricula, and matters of pupil placement, discipline, promotion, etc.

The column headed "cooperatively," which refers to matters which are worked out cooperatively by the superintendent and the board could not have been used if superintendents were consistent with the policy laid down at the beginning of Section I. The only possible use of this would have been when the board had more expert knowledge than the superintendent on some phases of a question and the superintendent had more expert knowledge than the board on other phases of the same question. Under these conditions the problem would be best worked out cooperatively. Therefore, when a superintendent cast a vote in this column he was admitting that superintendents should not have as expert knowledge as board members in general on some phases of the problems occurring under these captions.

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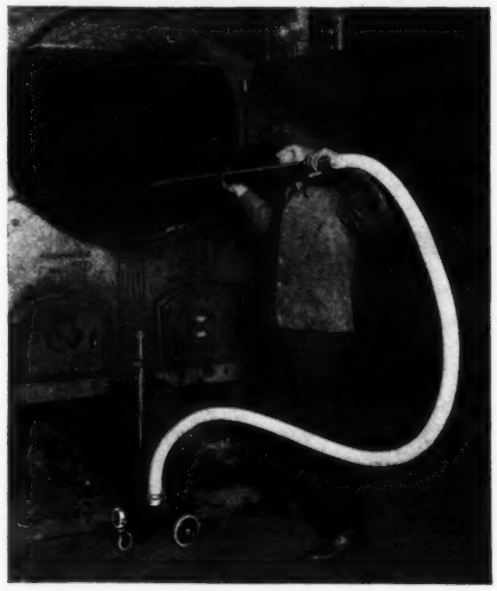

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Let us examine the votes in this column. All the items of II-A headed "Finances," under the fixing of salaries for the noninstructional staff and under all the items connected with existing and proposed buildings are in this category. The writer believes that the final responsibility for legislation or action in these matters should rest with the school board, but all of these matters should be placed either in the "superintendent" column or the "jointly" column, mostly in the latter. Superintendents of schools should have more expert knowledge about such matters as school finances and school buildings than board members and if they do not they are not properly equipped to hold the position.

In the light of this section of the questionary it appears that where a superintendent has become expert in some field of school operation the board has given him a free rein and that the board has sought, considered well, and, in general, followed his recommendations on matters concerning which the board should properly legislate and on which the superintendent has good judgment. It appears, however, that the less expert knowledge the superintendent has the less the responsibility and confidence the board reposes in him. This is evidenced by the falling away of these qualities through finances to building matters on which few superintendents have any degree of expertness. The writer believes, not that boards should throw the responsibility for action and advice in these matters more and more on the superintendent. And, the superintendent should see the need and make himself as expert as is necessary on the subjects. After this is done the boards will give the superintendent the proper hearing for his recommendations and latitude of discretionary action.

Conclusions

The general conclusion that can be drawn from the answers given is that the superintendents feel that the school board should be a legislative organization passing upon general policies and giving the superintendent a general grant of power to carry out these policies in his discretion.

In regard to the details of the relationships in working out and formulating general policies, there seems to be a general desire to keep the school board continually and completely informed on any matters of present policies or future policies that might be contemplated. There seems to be a general sentiment favorable to proposing the change or adoption of policies only when the committee will be likely to adopt the proposal and not to bring the public into the matter until it has been settled.

The grand totals of votes on the placement of authority show that the opinion is that the school board, on the superintendent's recommendation, should be the authority in the largest number of situations (1208) followed by the superintendent alone in 908 situations. Aside from questions relative to proposed buildings, it appears that the school board should not act without professional advice.

In routine matters and in the carrying out of policies laid down by the school board, the authority should rest with the superintendent, such as in the purchase of textbooks, transfer of teachers, placement of pupils, etc. General policies should be adopted by authority not only of the board but on the recommendation of the superintendent.

There are two constructive suggestions resulting from this study:

1. That there be a solution or an attempt to solve the dilemma as to how superintendents should be trained in the proper exercise of judgment in handling matters of proposed general policy if there is no one best way to do this, or if there is one best way, that it be discovered and taught in training schools for superintendents.

2. That superintendents of schools become as expert in matters of school finance and problems of existing and proposed school buildings as they are supposed to be in problems connected with actual classroom instruction, thus having as much influence and responsibility in the treatment of the former as of the latter type of problem.

A DETERMINATION OF THE COST OF COLLECTING TAXES FOR SCHOOLS

(Continued from Page 47)

figures for the cost of collecting school taxes, exclusive of assessors' costs, in all the school districts of Pennsylvania. Seven city-school districts which compared with each of the three cities of Glencoe, Hutchinson, and Litchfield, Minnesota, in school enrollment, were chosen from Pennsylvania for comparison with these three cities. It was found that the 21 cities in Pennsylvania reported an average cost of collecting their school taxes which was three and one-half times as great as the corresponding cost for the three cities in Minnesota.

To obtain a large view of the whole matter of the procedure for school-tax collection, Tables VI and VII are presented, showing in detail just what procedure is used for school-tax collection in twelve states, six west and six east of the Mississippi River. The states examined include all the five already discussed besides seven others. The states are compared with respect to the assessment and equalization of property valuations; the agencies which levy school taxes; the agencies which determine the tax rates for schools; the method of payment by the taxpayer or collection of the tax by the collecting agencies; and the method of disbursement of the funds to the proper educational agencies for final spending to educate the

(Concluded on Page 161)

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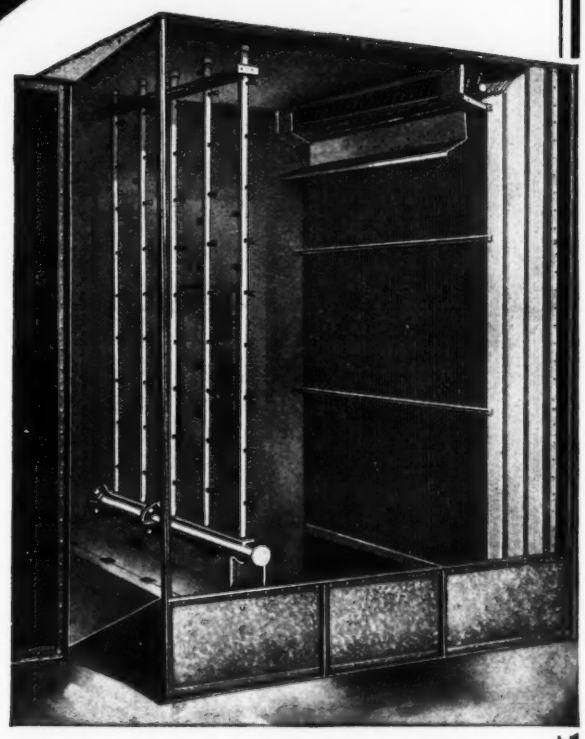

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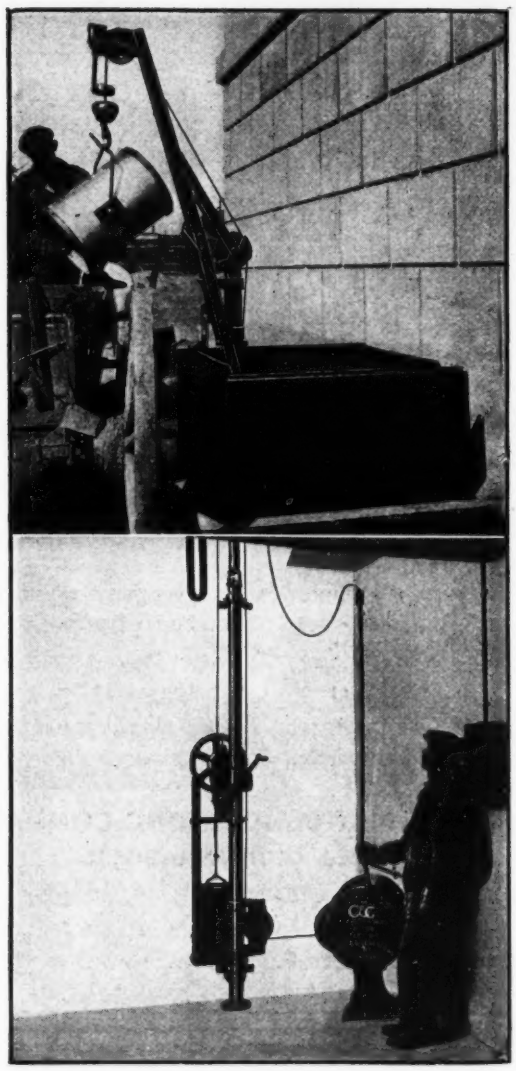

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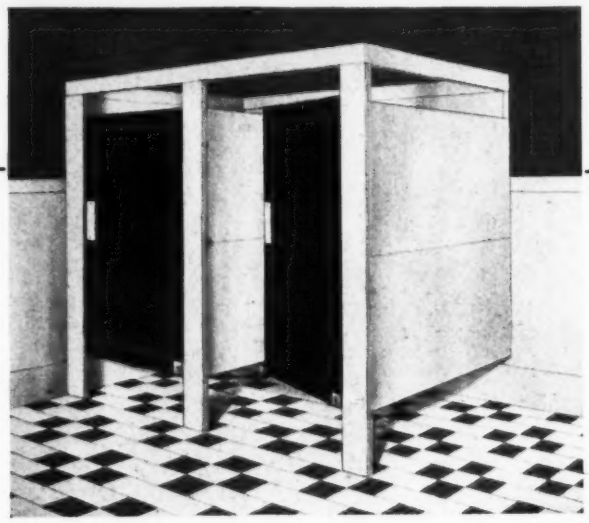

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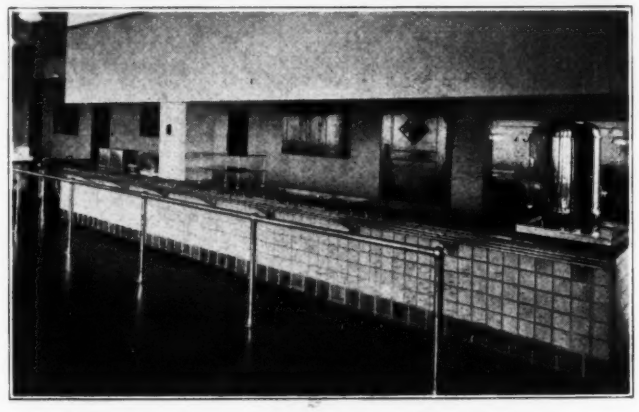

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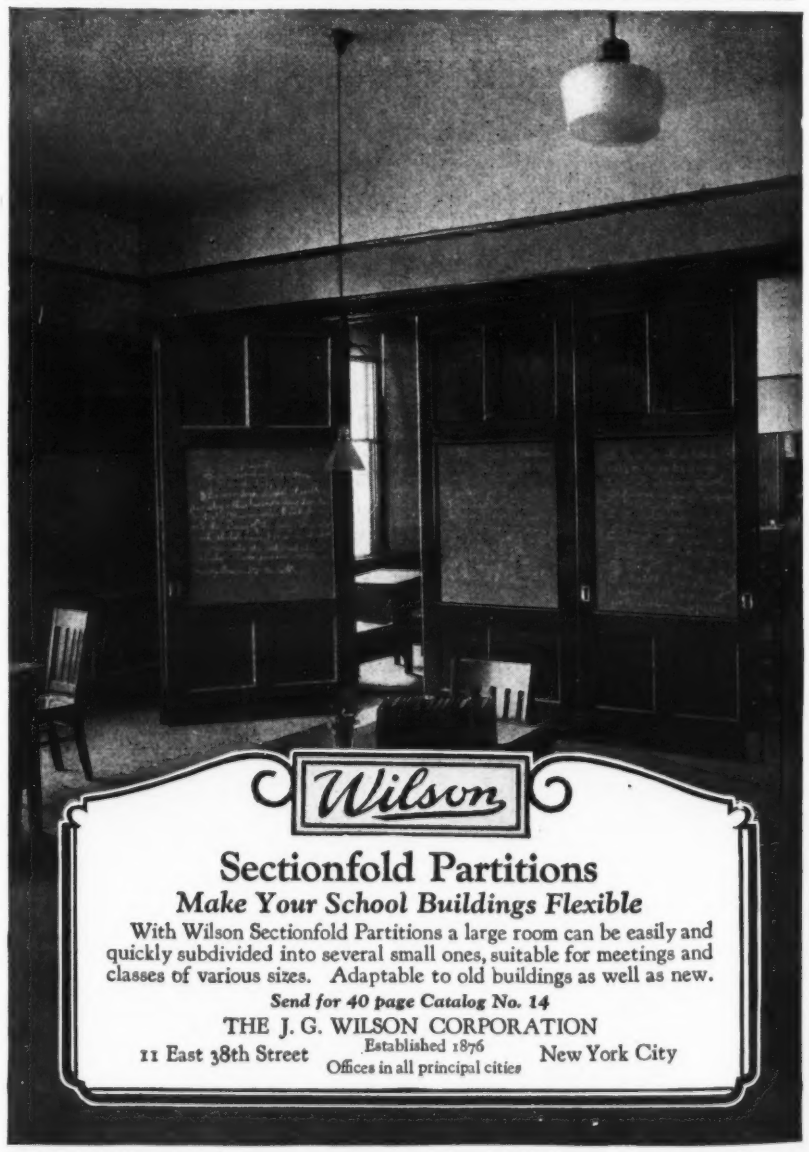
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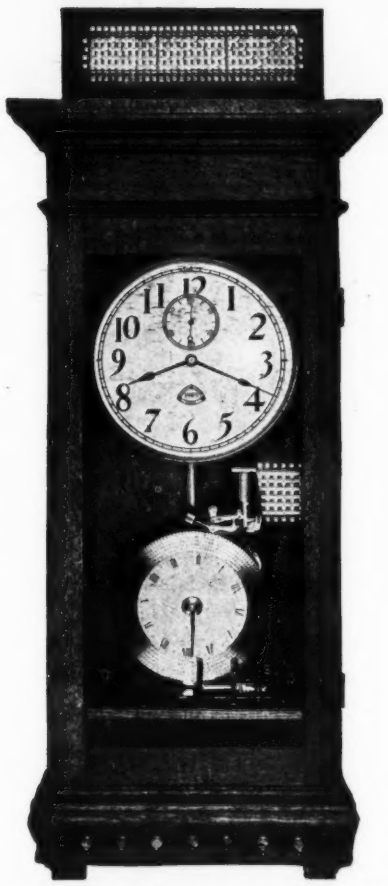

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(Concluded from Page 158)

pupils. It may be seen from Tables VI and VII that there is a model procedure for each of the five main steps in the assessment, levying, and collecting of school taxes for the twelve states examined. The usual practice is for townships, villages, and cities to employ their own assessors; for school boards to levy their own taxes directly; for the county auditors to calculate tax rates for school purposes; for the taxpayers to pay the county treasurers directly; and for the school revenue finally to reach the hands of the school district treasurers by whom it is then disbursed to pay the current expenses of maintaining the schools.

Differences in Cost in the Various States

It is evident that each of the five steps in the process has extreme variations representing the practices of some of the states, and that all the states do not follow the model procedure in every step even when they follow it in a few cases. From the nature of the variations from the model procedure, it is obvious that there must be disconcerting differences in costs in the various states. Is it too much to hope for, that procedures in all the various states may soon be modified to conform to that type which further investigation shall prove to be the most efficient and economical? In the school year, 1922-1923, Pennsylvania reported a total cost of school-tax collection, without assessment cost,[1] of $1,738,119. If the costs as figured for Minnesota should be in the ratio of one to three and one-half compared with those for similar communities in Pennsylvania, as stated above, then the Minnesota system transferred to Pennsylvania ought to mean a saving of almost one and one-quarter million dollars a year to the latter state. Moreover, there is not sufficient evidence at hand now to insist that Minnesota has the most economical plan of collection that could be devised. The evidence rather points the other way. Much more should be learned about procedures and possible economies before radical changes in state laws may be made with certainty that the best practice is being established. Certainly this type of school cost, the cost of assessing, levying, and collecting the school revenue, which has been but slightly explored hitherto, and which may show a difference of over one million dollars a year in one state, due solely to the differences in legal procedure employed, is worthy of the attention of persons interested in economical school administration.

[1]Annual Statistical Report. Superintendent of Public Instruction. Harrisburg. 1922-1923.

SMALL TOWN ESSAYS

(Concluded from Page 40)

you about their chances of election if they apply here."

To which the superintendent replied: "Your friends will be considered by my office in the same way they would be considered if they were recommended by any other prominent citizen of this town. Your opinion of a candidate will count with me insofar as I find it reliable."

There was more to this conversation but this is a fair summary. Later, the superintendent had applications from friends of the new board member. Some were hired, others not. Applicants still had to conform to the standards of training and experience regardless of their political connections. In time this new board member became an old board member, and the happy part of this story is that, when once he was convinced that the superintendent actually was trying to select his staff on the basis of merit, he became a staunch supporter of the administration. His influence grew.

The superintendent of this town was a great and good man. A weaker character might have taken arbitrary measures with the new board member—might have used strong language when he found himself locked up in an office and confronted with a patronage-seeking politician. He might have truckled to the vulgar sense of a square deal by rejecting summarily all the applications from friends of the school-board member, whether they were competent teachers or incompetent teachers.

Some weak souls try so hard to stand upright that they lean over backwards.

SALARIES OR WAGES?

(Concluded from Page 45)

proval only on those who are qualified, by personality and preparation, for the delicate task of educating children. If they will follow the example of the committees on entrance in the higher-class medical schools, we shall soon begin producing a uniformly high type of teacher who will automatically belong in the salary class. Perhaps it is not too much to hope that some day educators of outstanding ability may command "fees" or "retainers" for their services.

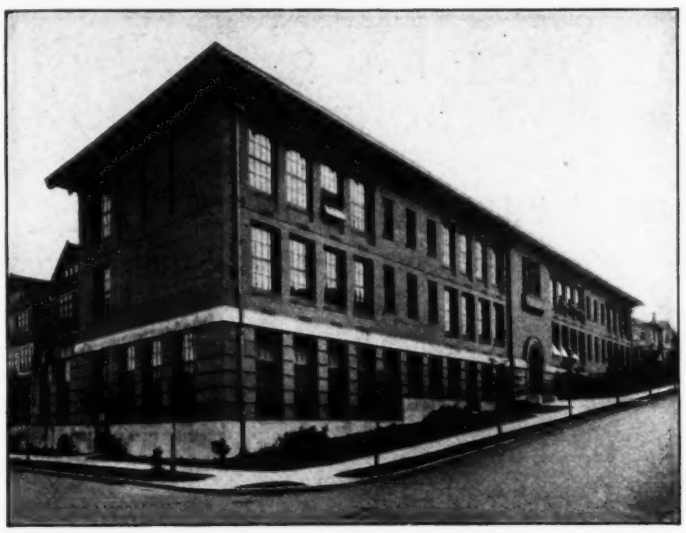
To summarize: 1. The public is justified in placing in the wage-earning class those teachers who are poorly prepared and in the work, temporarily. 2. Definite salary schedules based on preparation, experience and merit will serve to professionalize the job of teaching. 3. Greater attention should be paid to the selection, placement, and supervision of teachers. 4. Teacher-training institutions have a great responsibility in turning out graduates with adequate preparation and superior ability. 5. The profession should be stabilized by more permanent tenure and adequate compensation.

SCHOOL HOUSEKEEPING

(Continued from Page 48)

Weekly attention would be of course the more desirable and the least amount of labor and material in the long run, but it has become the custom to clean floors at the Christmas, Easter and summer vacations and customs are hard to break down.

If the floors have been brush-swept each day, it may be advisable to scrub some of them with



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scouring powder and the electric scrubbing machine.

If the floors have been mop-swept each day, they will appear dull and lifeless but they will be clean and will not require scrubbing.

FIGURE 5.

Rewaxing is now in order. For two reasons, wax, in liquid form, should be used. Owing to the naphtha in it, liquid wax makes a very effective cleaning agent and will quickly remove white water spots as well as dirt in worn spots. Liquid wax is less laborious to apply than paste wax. It is poured directly from the can onto the floor and then spread with a wax mop. Sufficient time should be allowed for the solvents to evaporate before the electro polishing machine is used to bring the floor back to its original glossy and finished appearance. The polishing machine is shown in operation in Fig. 5.

Conclusion. It is hoped that this series of articles on floors have been at least informative, as the writer is well aware that no claim for originality can be sustained.

While the floor problem is probably the most difficult as well as the most important for the janitor to solve in his work, a complete housekeeping series would include other phases of janitorial service, such as (1) the personal appearance of the janitor, (2) the cleaning of walls and woodwork, (3) the social relations of the janitor to the school and community, (4) the cleaning of glass, (5) the etiquette of the flag, (6) the cleaning of enameled and metal surfaces, (7) the tools of the janitor's trade, and, (8) schedule making and reports.

School boards should demand, first of all, instead of last of all, a satisfactory housekeeping system—a system that will convince them as the elected guardians of school property that such property is operating at a minimum depreciation and maximum sanitation. Then and only then can they feel that they have performed their full duty toward the present and future children of their community.

STATISTICALLY SPEAKING VERSUS PICTORIALLY PRESENTING

(Concluded from Page 64)

7. Time in excess of one year required in the several grammar school districts to do one "grade" of work.

8. Cost per pupil of one year's instruction in the several grammar school districts.

9. Comparative success of product of grammar schools as measured by high schools.

10. Equivalent cost of technical high school as shown by purchasing power of a dollar expended for class instruction.

11. Same as 10, only for vocational schools.

12. Relative valuation of different subjects in secondary schools as shown in apportionment of every dollar expended for instruction.

13. Same as 12, only for high schools.

14. Same as 12, only for technical schools.

15. Same as 12, only for vocational schools.

16. Cost of one pupil recitation in certain subjects in secondary (or high) schools.

17. Percentage of total tax devoted to school maintenance in cities and towns of metropolitan area, county, state.

18. Tax for school maintenance on $1,000. compared with other cities and towns.

19. Expense per pupil for school year in cities and towns of metropolitan area, county, state.

Each one of these lends itself particularly well to visualization by means of graphic charts; many of these are suggestive of further data which might be obtained and would serve a useful purpose.

Every good custom may be abused and this is no exception. I remember once visiting the office of a school superintendent in the South. His district was a small one but the walls of his office were covered with wonderful charts, beautifully executed—some people would have considered them too bizarre, but knowing the importance of charts and their fundamental purpose, I was not hasty in condemnation of this feature. However, on closer examination, I discovered that, by some unfortunate means, he had chosen a great deal of relatively unimportant matter for chart subjects, and had missed the real vital factors. Moreover, after investigating his system in accordance with my instructions from the state superintendent, I found that he had no scientific cost data to back up his pretty pictures. Charts are to *inform,* not to mislead or misrepresent. They should be the natural development of cost-accounting.

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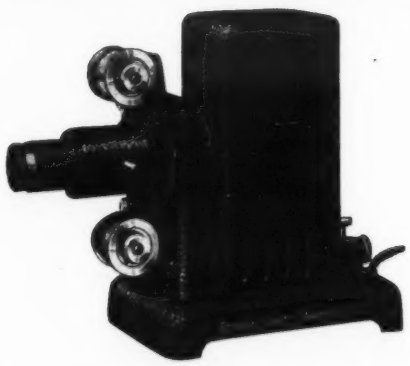

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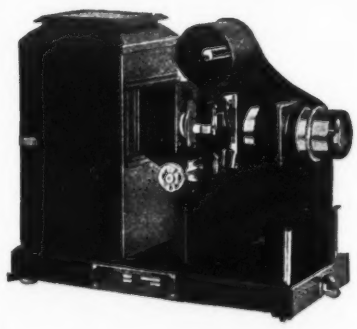

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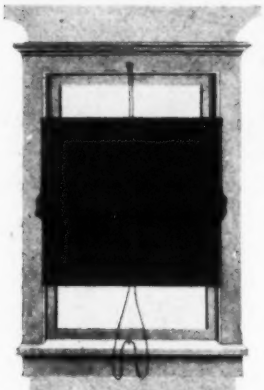

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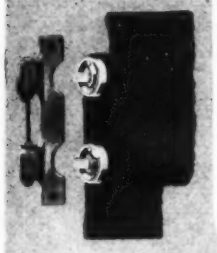

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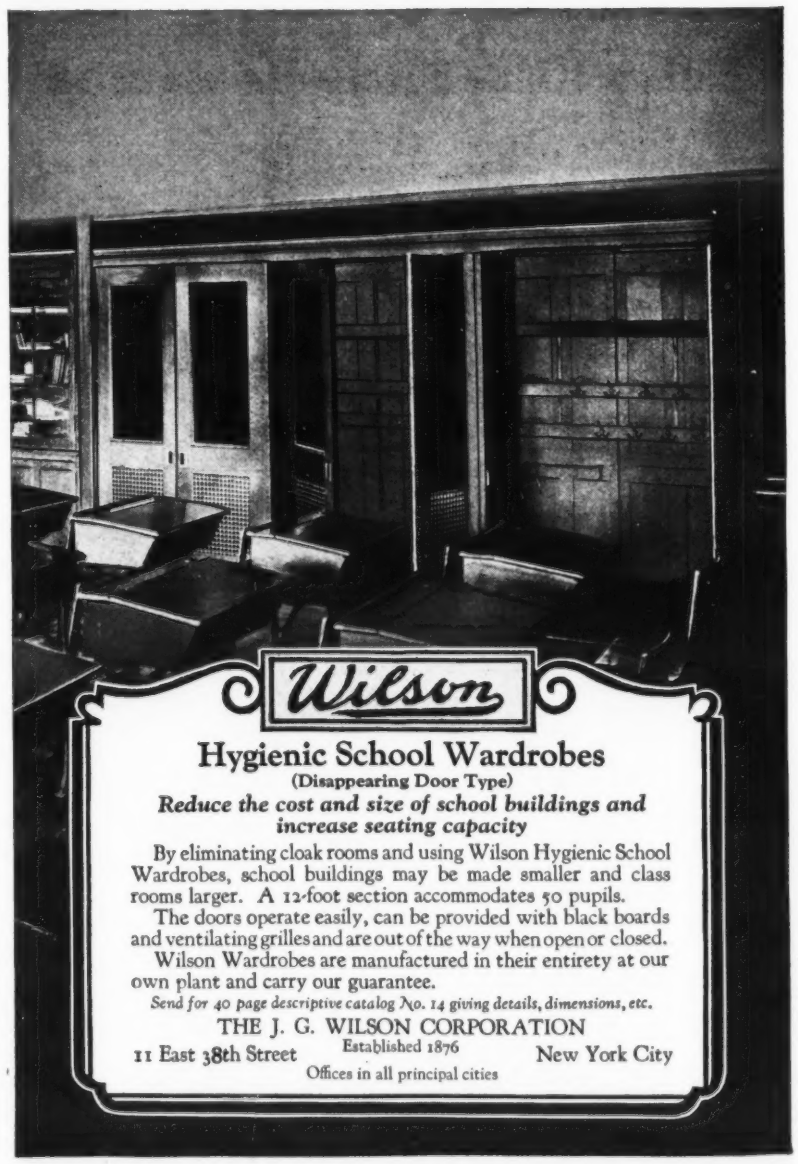

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BOOK REVIEWS

Instructional Tests in Algebra

By Raleigh Schorling, J. R. Clark, and Selma A. Lindell. Paper, 64 pages, price, 28 cents. World Book Co., Yonkers, N. Y.

Teachers of algebra all recognize the fact that it is one thing for a student to understand an algebraic operation and quite another thing to acquire skill in applying that operation correctly and rapidly in computation. Drill is the only means of acquiring these skills and of increasing proficiency.

The present book provides a series of drill exercises in 52 fundamental operations or principles which every student must master. A method is suggested for repeated use of the exercises so that each individual may learn his particular difficulties and bring his achievement up to a desirable standard, without interfering with his own progress or that of the class. Definite established principles of drill derived from the psychology of learning have been applied to the exercises. The standard set up has been established by examination of the performance of large numbers of students.

The material will be of help in any class, and will save the instructor much labor in developing his own material—which is not likely to be well balanced.

Social Theories of the Middle Ages

By Bede Jarrett. Cloth, 8vo. Price, $4. Little, Brown & Co., Boston.

Our knowledge and understanding of the middle ages, particularly of the thirteenth, fourteenth, and fifteenth centuries, have undergone a radical transformation since Victorian days. While the works of the great English historians of the nineteenth century still color strongly our textbookmaking, our more advanced historians in the special fields of social, economic, and governmental science have discarded many of the misconceptions and errors of Hallam, Milman, Froude, and Macaulay and have gone back to original documents and contemporary evidence for their information and inspiration.

The present book is a valuable addition to the rapidly growing material on the medieval period because it affords a graphic, comparatively brief, and entirely readable summary of the social theory that actuated the thinking and controlled—even though ofttimes dimly and imperfectly—the social action of the times. Our understanding of many present-day ideas of law, education, the position of woman, property, money-making, peace and war, and art, will be clearer if we read of the early growth of thought in these fields.

The author is appreciative, sympathetic and entirely familiar with the period, but his enthusiasm never gets the better of his critical attitude of mind. The reader will enjoy the early concept of the origin of governmental power in the people and the dependence of the king's rights on the people; he will rather wonder at the defense of capital by St. Thomas Aquinas; and he will appreciate the liberal educational views of Mafeo Vegio.

Standards for Public-School Janitorial-Engineering Service

By N. L. Engelhardt, C. E. Reeves, and G. F. Womrath. Paper, 53 pages. Published by the Bureau of Publications, Teachers College, Columbia University, New York, N. Y.

Score Card for Public-School Janitorial-Engineering Service

By Engelhardt, Reeves, and Womrath. Six pages. Bureau of Publications, Teachers College, Columbia University.

The present score card, and the handbook which outlines standards for its use, follow the plan of the well-known Strayer-Engelhardt score card for measuring school buildings. All elements which, in the opinion of the authors, are essential for measuring the situation in the janitorial and engineering care of a school building have been collected and rated so that a perfect type of service will result in a total score of 1,000 points. Sixteen major headings are considered:

1. Administration of janitorial-engineering service.
2. Personnel factors.
3. Building facilities for janitorial service.
4. Amount of work required per janitor.
5. Daily cleaning of floors.
6. Dusting.
7. Scrubbing and mopping.
8. Oiling of floors.
9. Cleaning and polishing of woodwork and furniture.
10. Washing glass.
11. Cleaning toilets.
12. Cleaning blackboards.
13. Cleaning erasers.
14. Other cleaning.
15. Operation and care of heating and ventilating plant.
16. Special work.

It will be noted from the foregoing that the score does not represent merely the work of the janitor-engineer, but seeks also to rate the administrative phases which are not in the control of the janitor himself but which rather belong to the school executives entrusted with the care and supervision of the school buildings.

A score card like the present is of undoubted value in that it affords a uniform method for reviewing school buildings and for overcoming those personal differences in efficiency which a school janitor will exhibit due to varying physical conditions in buildings and due to the personal like or dislike of the supervisor for individual janitors.

The card has been developed by two men who have a splendid theoretical knowledge of janitorial work based on the inspection of considerable numbers of school buildings in the capacity of surveyors and college professors of school administration. The third author is a practical school-board business manager, who has had considerable experience in handling janitors and who has shown by actual results in a large school system that he thoroughly understands the efficient management and satisfactory service of a large corps of janitors.

A card like the present, however, contains some elements which are decidedly unfair in that it sets up an absolute standard of service and requires one method of handling every detail of janitorial service. It may be questioned whether other methods are not equally as good as applied to cleaning and the care of heating apparatus. The sections devoted to the cleaning of blackboards may be taken as typical of an element which is involved in a number of the sections. A method of cleaning blackboards calls for the wet sponging of black board surfaces, a method which practically all manufacturers of blackboards declare to be unsatisfactory and injurious to the boards. Everything collected by several manufacturers seems to point to the desirability of using a dry method of cleaning, which although it is slower and perhaps dustier than wet sponging, still prevents the blackboards from gumming up with chalk dust and of ultimately

The "SLOW-MOVING PICTURE" Method

OF SELF-TEACHING BY SAMPLES

IN ARITHMETIC

Specimen Exercise II page 7

Harter Workbook in Arithmetic

Add: 45
42
—

Step one
45
42
—
7

Step two
45
42
—
87

Step one: We look down over 5 and 2, and think 7. We put 7 below the line under 2. Notice we begin on the right-hand side. We always read down.

Step two: We look down over 4 and 4 and think 8. We put 8 below the line under 4. Our answer is 87. 45 and 42 are 87. We can say this in a number of ways—The sum of 45 and 42 is 87. Or, when we add 45 and 42 we get 87. Or, 45 and 42 more are 87. Or, 45 plus 42 equals 87. Or, 45+42=87.

IN ALGEBRA

Specimen Exercise No. 191 page 130

Harter Workbook in Algebra

Sample Problem: Divide $3a-7b$ by $a-2b$.

How to solve: (1) Rearrange terms if necessary.

(2) Divide the first term of the dividend by the first term of the divisor: $\frac{3a}{a}=+3$. Write $+3$ as the first term in the quotient.

(3) Multiply the whole divisor by the first term in the quotient. $3(a-2b)=3a-6b$. Subtract $3a-6b$ from the dividend.

(4) The remainder is $-b$. $-b$ cannot be divided evenly by a, hence we can divide no farther.

The quotient is 3 and the remainder is $-b$.

Step one

$a-2b \overline{)3a-7b}$

Step two

$\begin{array}{r} 3 \\ a-2b \overline{)3a-7b} \end{array}$

Step three

$\begin{array}{r} 3 \\ a-2b \overline{)3a-7b} \\ \underline{3a-6b} \\ -b \end{array}$ quotient / remainder

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requiring refinishing and resurfacing. The manufacturers of the artificial boards are particularly clear on their statements that wet sponging rapidly wears down the surface of blackboards and requires refinishing. To rate a janitor on the basis of using dry method as against a sponging method would be manifestly unfair, particularly because it has been proved that the dry-cleaning method does prevent gumming of blackboards and maintains both the surface of artificial and natural slate boards for a longer period than the wet sponging method.

Clothing and Textiles

By Mary L. Matthews. Cloth, octavo, 180 pages. Price, $1.10, list. Little, Brown & Co., Boston.

The fundamentals of sewing and of textiles and clothing are presented in this book by means of projects for the making of simple essential garments. These projects are accompanied by the study of the materials, tools, and sewing accessories, and by various home problems and questions for study. The course outlined provides a well-balanced study of the correct use of textiles in garment making and home furnishing, the hygiene of dress, the simplest art principles applied to garments, and care and repair of garments and household articles.

What Arithmetic Shall We Teach?

By Guy Mitchell Wilson. Cloth, 149 pages. Price, $1.20. Houghton-Mifflin Co., New York city.

What elements of arithmetic shall we teach? What topics, or subject matter shall we include and exclude? What scientific facts are available to determine the processes and the degrees of difficulty applicable to each grade? How shall we build a course of study and what will a typical course contain? What attention shall we give to vocational figuring? To reasoning problems? To local needs?

The present book answers these and other equally important questions and makes a very useful restatement of the entire problem of aims, methods, and content of the arithmetic course in the grades. The book is equally useful for the teacher who approaches her work in a spirit of scientific inquiry, as it is for the supervisor who is preparing courses.

Supplementary Problems for Mechanical Drawing and Blue Print Reading

By John F. Faber. Cloth, 136 pages, illustrated. Price, $1.50. Bruce, Milwaukee.

The book consists of problems in mechanical drawing and blue-print reading and is suitable for supplementing any introductory course in the subject. The drawings were taken from the regular classwork of students in the high school and represent one way in which the problems may be drawn. The selection of views may be changed in many cases to suit the desires of the instructor.

The book is divided into eight sections: Part I offers instructions and drawings for problems in elementary freehand sketching; Part II takes up instrumental drawing; Part III offers work on sectional drawing; Part IV takes up intersections and developments; Part V takes up pictorial drawing; Part VI discusses detail drawings; Part VII is devoted to assembly drawings; and Part VIII takes up useful data and tables applicable to the subject.

Laboratory Manual for General Botany

David Potter. Part I, paper, 145 pages; Part II, paper, 121 pages. Bruce, Milwaukee.

The present books have been prepared with the aim of creating and maintaining a live interest in the subject for the sake of the knowledge derived. The manuals acquaint the student with the facts presented, and in addition, furnish a correct set of drawings correctly labeled.

The teaching method employed in the book gives time for a study of the material and allows the student to cover more ground, without sacrificing the quality of the work. A unique feature of the book is the provision for a classification of the plants to be studied. A glossary forms a part of each exercise and provides the derivations of each new technical term. Following the glossary is a list of questions designed to bring out important facts in the material studied.

While the teaching method employed entails considerable work on the part of the instructor, its results amply compensate for the effort expended. The manual is designed to cover a general course in botany or a botanical section of the course in general biology. The book offers a list of the materials called for, and in addition, certain class material of a helpful nature.

The book offers a new and interesting method of teaching botany and will be found especially helpful to high-school teachers. The material may be used in connection with a textbook, or to accompany a series of lectures.

Spelling Games

By Nell K. Gleason. Cloth bound, 89 pages. Published by Beckley-Cardy Company, Chicago.

In this little volume spelling is made attractive by introducing the subject through the medium of games and little incidents in child life. A series of spelling plays is presented and words become the factors dealt with. Some word puzzles are presented.

The author also supplies definite thoughts and directions on the teaching of spelling. The book is well illustrated.

Children of Grizzly

By Sadye Madalene Hageman. Cloth, 176 pages. illustrated. Price, $1. World Book Company, Yonkers-on-Hudson, N. Y.

Here is an Indian story, cast in the Western country, and embellished with the charm of legend. It breathes the freedom of the great open spaces, and has enough of the mythical as well as the adventurous to fascinate the child mind. The author seeks to stimulate the pursuit of health and the building up of a sound body, and believes that the objective is best attained through the realm of imagination as it may be excited in story telling. She does not believe in health lessons, but rather in health experiences.

The text also emphasizes self-government and team play. Each chapter is followed by a series of questions. The book is illustrated with pen drawings.

New Third Reader

By Walter L. Hervey, Ph.D., and Melvin Hix, B.S. Cloth bound, 282 pages. Published by Longmans, Green & Co., New York.

This is the third book in the series of Horace Mann readers. The editors in compiling the same have borne in mind the value "of tapping energy through appeals to intrinsic interest and cumulative procedure." They estimated the standards of reading likely to be absorbed by the pupils to be served and then drew upon the treasures of literature for the most helpful material. In this effort they succeeded admirably.

The book is printed in good readable type and illustrated throughout with colored pictures.

Readings from the Great Historians

By D. M. Ketelbey. Cloth, 438 pages. Price, $2. Published by Houghton Mifflin Co., New York City.

The selections in this book have been based on the principle that history shall be charming in style and vivid in interpretation. It is therefore made up most largely from the writings of the Victorian historians whose accuracy is no longer asserted, even though the literary qualities of their rounded periods may be undimmed. While the

(Concluded on Page 168)

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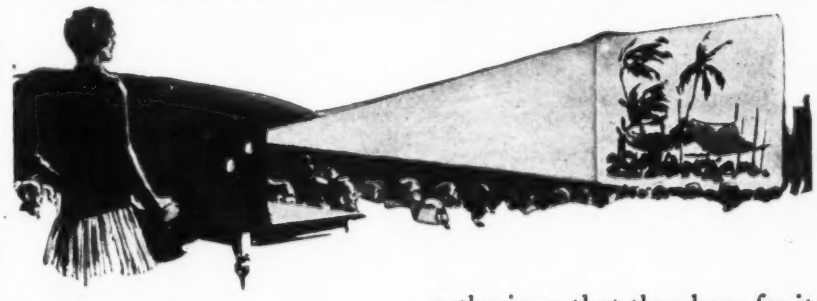

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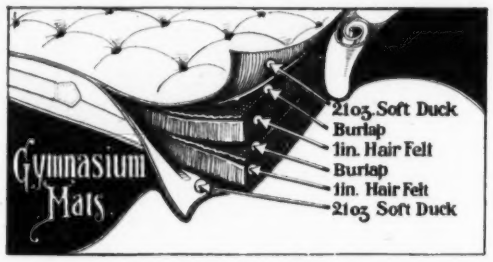

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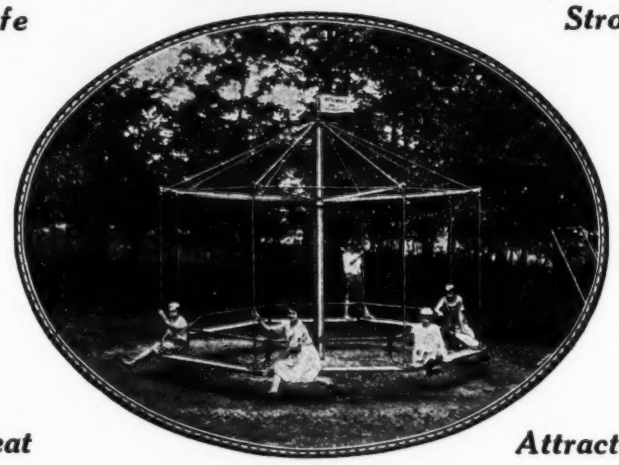

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(Concluded from Page 166)

mature adult reader of history may be forewarned against the faults and failures of the older historians, it may be questioned whether immature high-school and college students are able to form reliable judgments in historic matters about which there is controversy. It would seem that the book which selects from later—even present-day—writers, passages which reflect the present-day interpretations as well as the facts is ultimately the most useful.

The Covered Wagon

By Emerson Hough. Edited by Clarence Stratton. Cloth, 387 pages. D. Appleton & Co., New York City.

The stories of emigrants crossing the plains, braving the hardships of pioneer days, have always had their peculiar thrill and charm. They have pictured a phase of American life which has involved the adventurous and has appealed to the imagination.

"The Covered Wagon" has fascinated the lover of Western life. It forms a page in the country's history which must always prove interesting to those who admire physical courage and human endurance. The present, a low-priced school edition, with its biographical and literary introduction, should be widely welcomed.

Junior National Typewriting

By Rupert P. SoRelle. Cloth, 106 pages. Published by The Gregg Publishing Company, New York City.

Here is a typewriting textbook. It addresses itself to the student in the junior high school. The major part of the book is devoted to keyboard technic. This is supplemented by lessons in arranging themes, manuscripts, and letter writing.

The plan adopted in the arrangement of studies is skill development first, and the application of that skill thereafter. A series of test lessons are provided. Sample letters dealing with business and social matters are liberally provided.

Ventilation and Health

By Thomas D. Wood, M.D., and Ethel M. Hendriksen. Cloth, 210 pages. Price, $2. D. Appleton & Co., New York City.

"Window Ventilation" as a distinct method of improving air conditions in schoolrooms, has been advocated for 25 years past by a small number of enthusiasts. These men never made much progress because they lacked standing as engineers on the one hand and as physicians and hygienists on the other. They failed, too, because they were advocating ideas diametrically opposed to currently accepted theory and to new developments in mechanical ventilating apparatus. Schoolmen, public-health and school officials, legislators, and the general public turned their backs on the open-window and fresh-air cranks, as they were often designated, and listened to the weight of authority of engineers or physicians whose conclusions were based largely upon a group of widely held theories and beliefs. These principles of ventilation may be briefly summarized as follows:

1. Breathe air containing an excess of carbon dioxide and certain organic matters which are poisonous or at least harmful. The purity of air can be determined by the amount of carbon dioxide found in it.

2. At least 30 cubic feet of air per minute per child is the minimum of ventilation needed in schoolrooms to prevent the accumulation of carbon dioxide, etc.

3. Carbon dioxide is heavier than air and, therefore, the foul air is found at or near the floor line. Fresh air must be introduced in the upper part of the room and foul air drawn out at the floor line.

4. Some diseases are air-borne and air must be completely washed to remove dust, bacteria, and harmful chemical contents.

5. Dry air is harmful and must be humidified.

6. Air must be maintained at a uniform temperature of 68° or 70°. Variation in temperature is bad because cold air causes illness and heated air produces discomfort.

The application of these principles to the ventilation of school buildings has led to the development of elaborate mechanical systems of ventilation intended to assure absolute uniformity in these conditions: (1) Thirty cubic feet of air per child per minute; (2) uniform humidity of 40 to 50 per cent; (3) a temperature of 68° or 70° at all times; (4) freedom from dust and odor and as near chemical purity as possible; (5) admission of air at a level eight feet above floor and removal of air at the floor line; (6) movement of all air without noticeable drafts.

As was stated in the review of another book in this column (November, 1926) the efforts of engineers to produce these conditions have led to the complication and expense of ventilating systems so that these have become burdensome in first cost and subsequent operation and maintenance.

During the past five years a new group of advocates of open-window ventilation has come into being, and the men and women who are its leaders are enthusiasts and, better still, scientists, physicians, public-health experts, and, in a few cases, educators and architects. Their plea has been for sanity in ventilation and for a revaluation of present practices. They say simply that the theory of ventilation as expressed in "standard" school ventilation is pure bunk, that there is no proof of the harmfulness of carbon dioxide or dryness of air or variability in temperature. They say there are no air-borne diseases. They claim that ideal ventilation can be produced by (1) proper temperature in which there is variation between limits of comfort; (2) air movement which is stimulating without being objectionably drafty; (3) an amount of humidity which may vary considerably; (4) freedom from dust and noxious odors; (5) direct admittance of air to rooms through windows.

The present book makes a strong plea for the principles just enumerated and backs them up with convincing experimental proof. The evidence not only of the New York Ventilating Commission, but also of numerous other experimenters is adduced. The standing of the senior author and the experience of the junior author in fighting tuberculosis give much weight to the entire work.

The single weak spot in the book is the unqualified advocacy of the open window. Just how windows on the lee side of buildings, or on muggy days, or in extreme cold weather can be depended upon to provide reasonably uniform fresh air has apparently not concerned the authors except that they have taken some evidence given by teachers and superintendents in a few isolated cases. The chapter on ventilating instruments shows a type of thermostat not suited mechanically to schools. The economic value of the newer forms of heat-regulating aparatus is entirely overlooked.

The book as a whole is sensible and thought-provoking and will be found useful by every school official who desires a concise and readable statement of present-day scientific knowledge of the ventilation situation.

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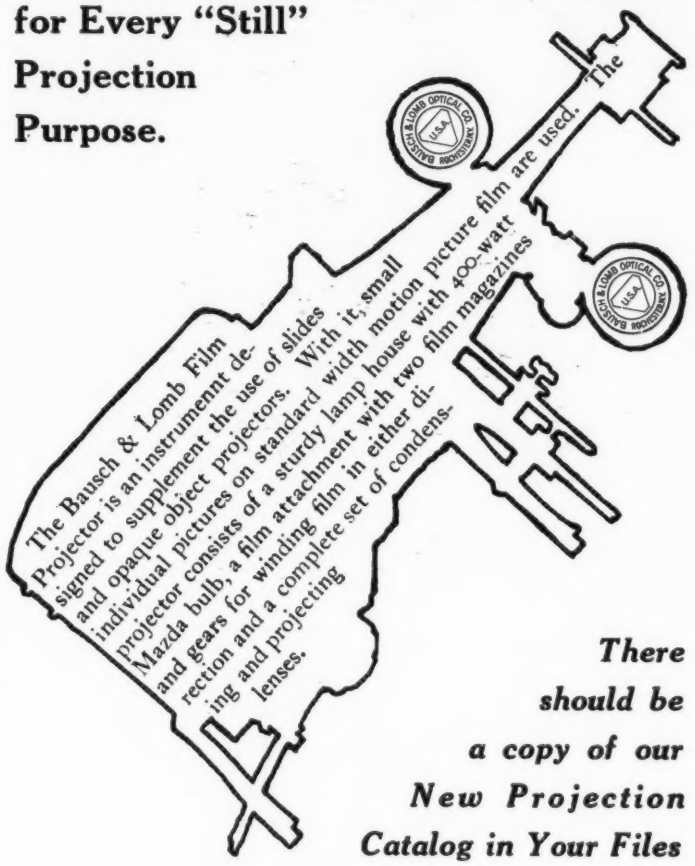
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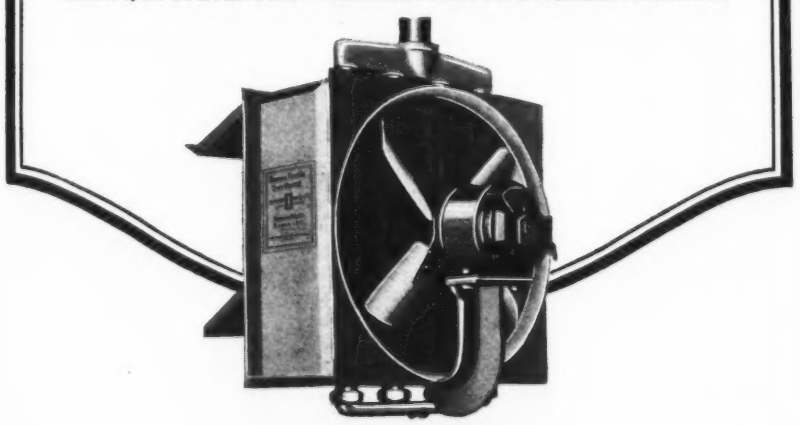

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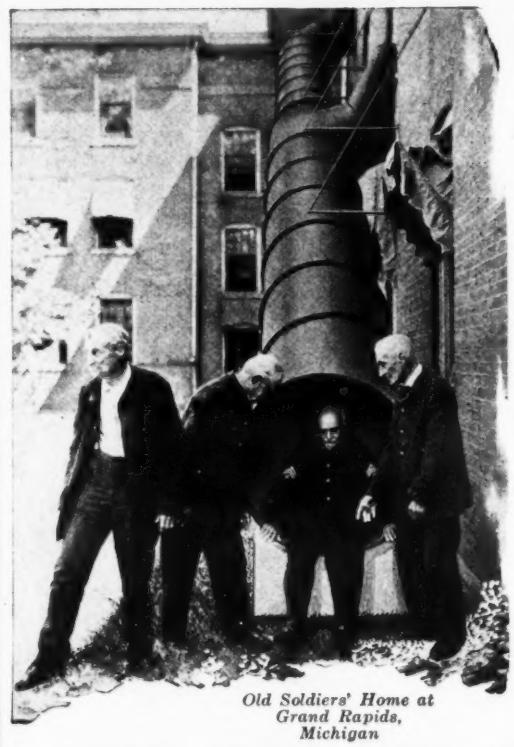

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SCHOOL HYGIENE

MEDICAL INSPECTION IN AMERICAN CITIES

The United States Chamber of Commerce has recently published data collected in a survey of 200 American cities on health care of school children. The facts have been compared with a similar study made in 1922 and considerable disappointment is expressed by the committee in charge that the health care of children had not progressed materially during the three years represented in the later study. It was found that 100 cities of the 200 reporting give a medical inspection annually upon admitting children to school, while 97 did not give such an examination. A total of 171 cities give regular medical inspection for defects and incipient illness, and 25 per cent give no such inspections. While in 1922, 158 cities had school physicians, only 125 report the employment of school doctors in 1925. It is more than likely that the reduction is not due to any falling off in the medical inspection but rather that another city department usually the health department, has assumed the work.

Of the 666 school physicians employed it was found that only 91 work on a full-time basis, while 575 work part time. This represents a falling off as compared to the situation in 1922. Splendid results were claimed for cooperation between the boards of education, the board of health, and local child-health organizations. It was shown that in 1925, 194 cities report cooperation and only four cities report that there is no cooperation.

Rather satisfactory conditions are reported concerning the ventilation, cleaning, and repairing of school buildings. While 26 cities report unfavorable conditions, 174 cities report favorable conditions.

A total of 163 cities report that school nurses are employed, and 36 report that nurses are not employed.

Hot lunches are served or are available in 48 cities and are not served in 150 cities. Only 17 cities report that milk is available for all children in the grades during the morning. A total of 142 cities provide milk service for undernourished children, and 40 do not.

HYGIENE AND SANITATION

—Evansville, Ind. In defining the elements which constitute a standard elementary school in the city, some attention is given to heating and lighting features. In this connection, the rules state that when there is need of artificial heat in the building, a health temperature for classrooms is maintained. Artificial lighting is not resorted to until all window shades have been raised to the tops of the windows.

In the matter of heating, the New York State Commission's standard of 68 degrees is approved for correct classroom temperature. In order to rank as satisfactory on an inspection, half of the rooms of a building must be between 66 and 70 degrees, and no room may be above 72. In regard to lighting, it is suggested that where the room is too dark, the electric lights be used, but all blinds should be at the tops of the windows when the lights are turned on.

—The school board of Duncan, Oklahoma, after smallpox had manifested itself in the community, has advised vaccination. The board has no funds with which to enforce its ruling, but will rely upon the cooperation of parents.

—In four of the New York City high schools, the swimming pools and gymnasiums will on certain nights and under certain conditions be open to adults.

—Dr. Richard W. Pullen, the superintendent of health at New Britain, Conn., issued a statement to the school public recently in which he said: "There still persists in the minds of a great many parents the idea that the diseases of childhood must be suffered by the children. In some cases parents go so far as to expose their children to scarlet fever, diphtheria, and whooping cough so that they may have it and get it over with. This is a mistaken idea and must lead to dire results in many cases.

"Probably there is no disease, the danger of which is so much underrated as whooping cough. It is quite evident from our records that a doctor is called only infrequently for whooping cough. For example, at the present time we have on record fifty-three cases, twenty-six of which were reported by agencies other than a physician, which fact shows that a physician was not called in these cases. The parents apparently felt that a doctor was not necessary for whooping cough."

—Mrs. Winifred Hathaway, associate director of the National Committee for the Prevention of Blindness has started on a 9,000 mile trip through the country expecting to visit about sixteen states. It is her purpose to induce boards of education in North Carolina, South Carolina, Florida, Alabama, Texas, Arizona, Oregon, Utah, Colorado, and Nebraska to encourage sight-saving classes. There are now in this country 264 such classes. It is the purpose to place 5,000 in operation.

—Upton, Wyo. Acting upon the recommendation of Supt. B. R. Porterfield, the board of education recently obtained the services of Dr. J. C. Reed to undertake the physical examination of pupils in urban and rural schools. The examination covered the eyes, nose, ears, throat, lungs, teeth, and digestion. Reports were sent to the parents and permanent records were compiled for the school office. It is planned to give mental tests to all pupils to be used in a reclassification of students next fall.

HEALTH REGULATIONS FOR TEACHERS

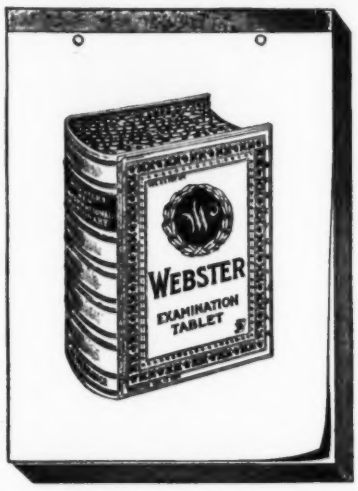
"At school the teacher should see that the temperature is not too high, and, where possible, the windows should be opened for ventilation. Drafts, are, however, to be avoided.

"The schoolroom should be kept as free from dust as possible. Pupils should be taught to clean their shoes or remove their overshoes on entrance; erasers should be cleaned out of school, and sweeping and dusting should be done after school in a manner as dustless as possible.

So said Dr. James Frederick Rogers, chief of the school-hygiene division of the United States bureau of education, recently. "The teacher should not remain in the room at the time it is being cleaned or dusted unless she must assume these duties herself; in which case she should use the most dust-free methods of cleaning and protect her nose and mouth accordingly with as many layers of gauze as she can breathe through with comfort.

"The light of the schoolroom should be ample and in the right direction for the pupils; but the teacher should avoid, as much as possible, the glare from looking directly into the light, such as unshaded rear windows, or artificial lights.

SPECIAL RULED AND PRINTED HEADING TABLETS



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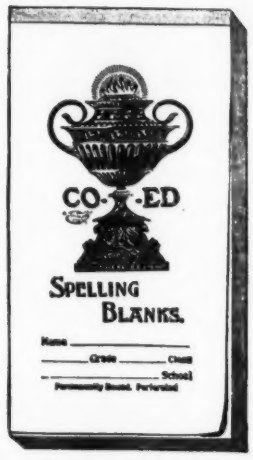

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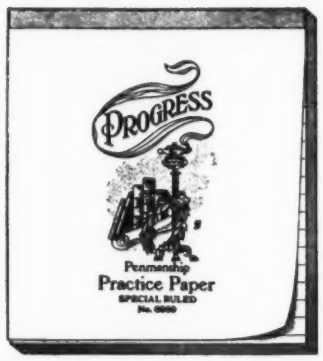

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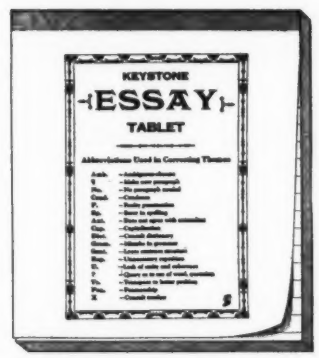

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IOWA DEPARTMENT OF PUBLIC INSTRUCTION REORGANIZED

The state department of instruction of Iowa, on January 3, was reorganized with a complete change in personnel of department heads. The reorganization was effected with the coming of the new state superintendent, Miss Agnes Samuelson.

As at present organized, the department will have eight new officials. Mr. Fred L. Mahannah, the new deputy superintendent, is a former school superintendent with wide experience in school administration. He is a graduate of Cornell College and holds a degree given by that institution.

Mr. O. E. Smith, who will be in charge of the placement bureau work in the department, is a graduate of Simpson College and is also a former superintendent. He was for four years a member of the State Board of Examiners and was for ten years secretary of the Iowa Teachers' Association.

Mr. R. A. Griffin, the inspector of consolidated schools, is a graduate of Drake University and has taken advanced work at Iowa State College and the Iowa Teachers' College. He has had twelve years' experience as superintendent of schools.

Miss Jessie Parker, who will have charge of the standard rural schools, received her education at Valparaiso University, and Iowa Teachers' College, and holds a degree given by Des Moines University. She has had considerable experience as a teacher and county superintendent.

Miss Clara Wallace, the inspector of normal-training schools, is a graduate of Monmouth College and holds degrees from the University of Iowa and from Chicago University. She has had wide experience in rural-school teaching and high-school teaching, and as a county superintendent and normal-critic teacher.

Mr. W. H. Simons, the inspector of graded and high schools, is a graduate of Tabor College, of Des Moines College, and holds a degree from the Nebraska University. He has held a number of superintendencies in the middle west and was for five years a member of the executive committee of the Iowa Teachers' Association.

Mr. W. A. Dunlavy, who will be in charge of the mining-camp schools, holds degrees from Highland Park College, from Des Moines University, and from the State University of Iowa. He has had considerable experience in rural-school teaching and as county superintendent of schools.

Miss Esther Tronstrom, chief clerk of the department, is a graduate of Mapleton High School and completed a special course at Iowa Teachers' College. She has had considerable teaching experience and was a county superintendent for the last six years.

MR. WOOD TAKES NEW POSITION

Mr. Will C. Wood, for the last fourteen years state superintendent of schools in California, has been appointed to the position of state superintendent of banking. The appointment came at a time when Mr. Wood had made a decision to retire from the school field following the defeat of the law proposing an increase in the salaries of state officers. It was Mr. Wood's desire to seek a new field where the compensation was more nearly adequate to his needs.

Mr. Wood is succeeded by Mr. William J. Cooper, formerly superintendent of schools of San Diego and Fresno. Mr. Cooper is a graduate of the University of California and has had wide experience in school administrative work.

BOARDS OF EDUCATION

—Samuel F. Hofstadter, a member of the Assembly of New York state is sponsoring a bill which seeks to enlarge the New York city board of education to fifteen members. Seven members constitute the present board.

Objection to the bill is made on the basis that it would introduce politics into the work of the board of education. It is pointed out that political debates would occur in board meetings, that board members would play for political advantage and popularity in making appointments and originating policies. The morale of the schools would be injured and the responsibility of the members of the board would be lessened. In fact, the creation of such a board would decrease greatly the efficiency of that body.

Under the present arrangement, the seven-member board of education has proved far more efficient than the old 46-member board. The latter was full of deadwood—men who retained their positions merely because of the honor they felt came from membership. The real work was done by a small, active group, and the remaining members trailed along in the current created by the active members. The present board has given itself to the tasks most unselfishly and energetically and has proved so efficient as to call forth praise from experts in education throughout the country.

—The new $275,000 high school at Toronto, Ohio, was opened with an address by C. B. Ullery, state inspector of high schools. President J. M. Anderson of the school board presided. Former members of the board occupied the platform. Peterson & Clark were the architects.

—The new $60,000 school at Richmond, Ohio, was dedicated with music and oratory. John R. Williams, assistant county superintendent, was in charge of the ceremonies. Earle L. Johnson of the Painesville township school board, was one of the speakers. The new school has been named in memory of Herrick Hutchinson, son of former Supt. James Hutchinson, who sacrificed his life in the world war.

—The new $35,000 high school has been opened at Lankershim, Calif., with C. W. Sandifur as principal. Capacity 600 pupils. Myron Hunt of Los Angeles is the architect.

—The new $20,000 consolidated school completed at Linden, Alabama, employs twelve teachers, and five busses to convey the pupils. Virgil L. G. Collins has been named principal.

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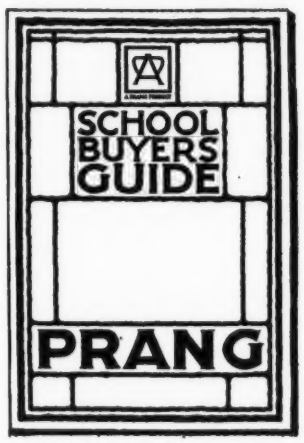

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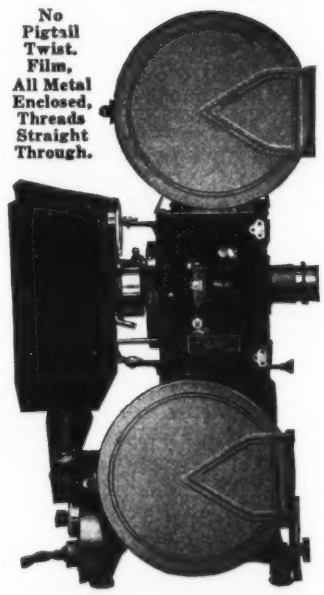

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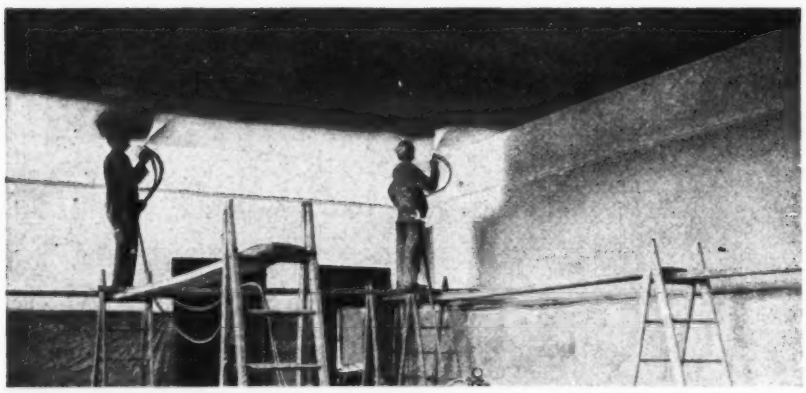

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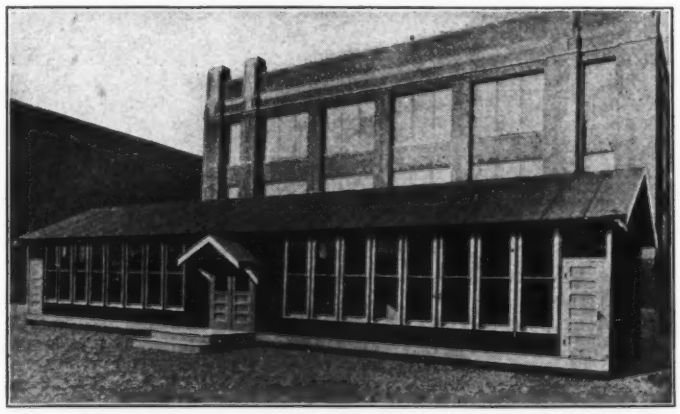

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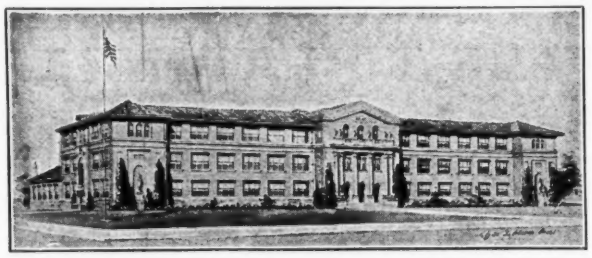

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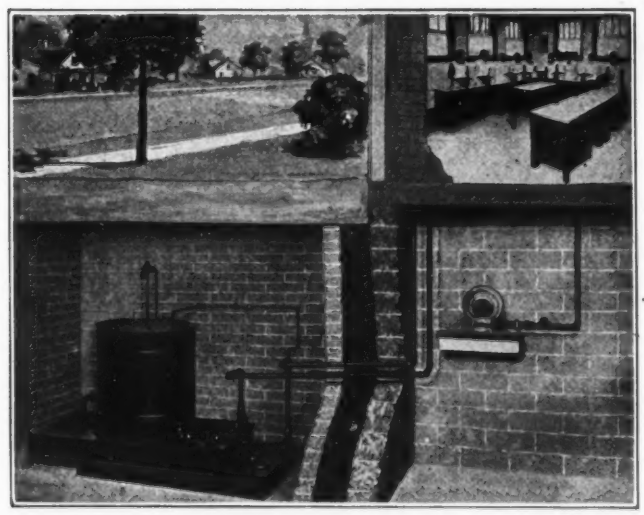

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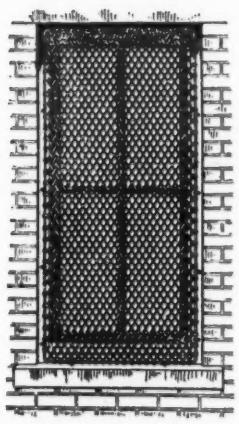

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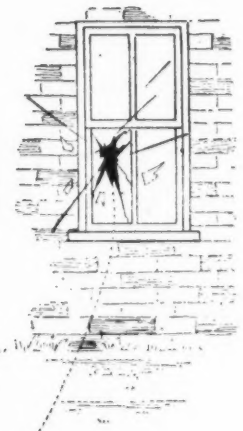

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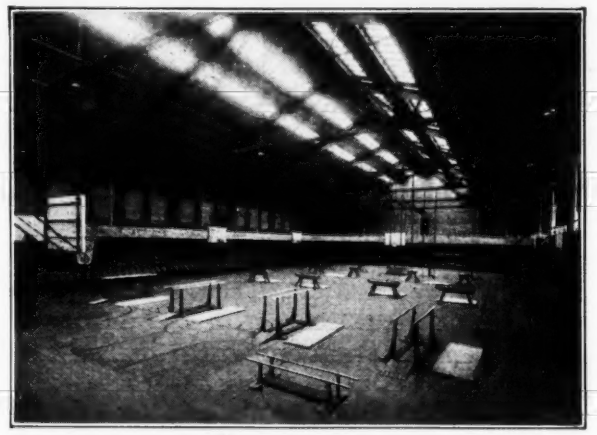

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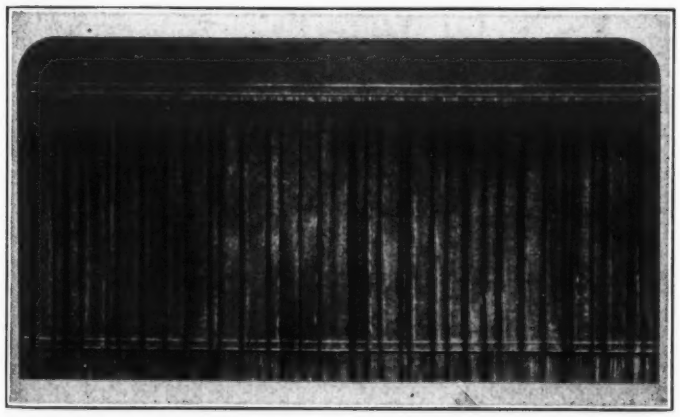

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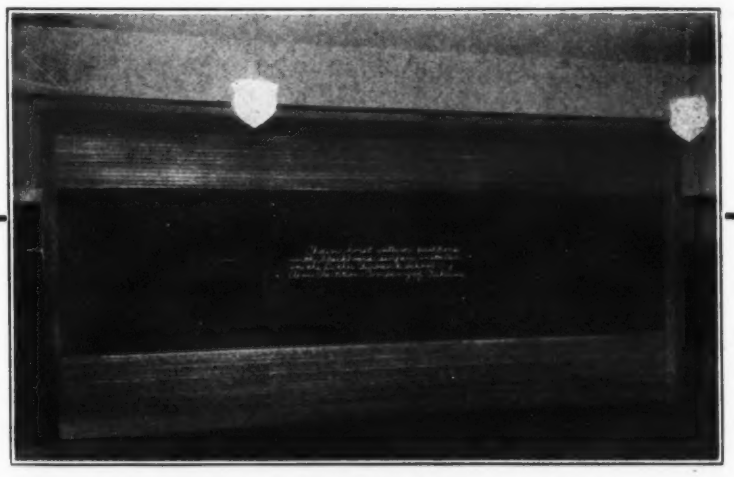

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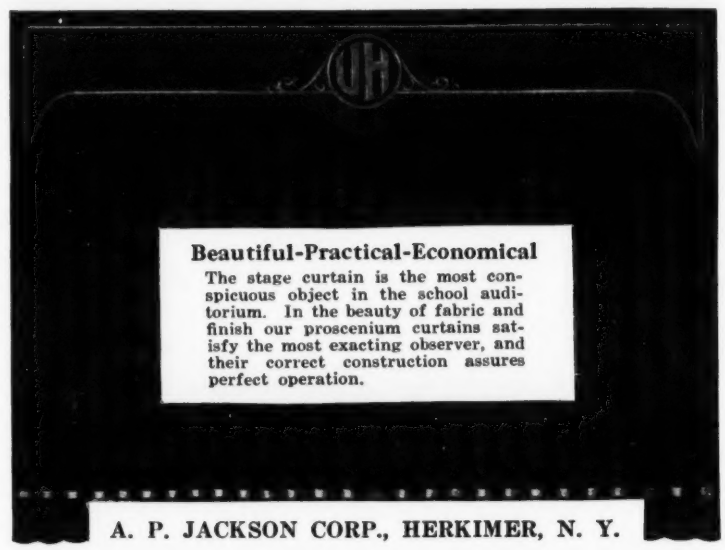
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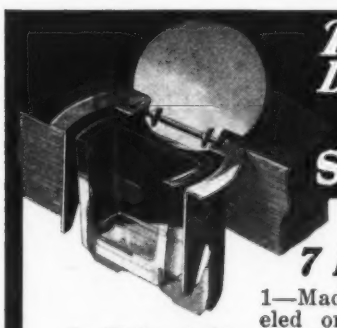

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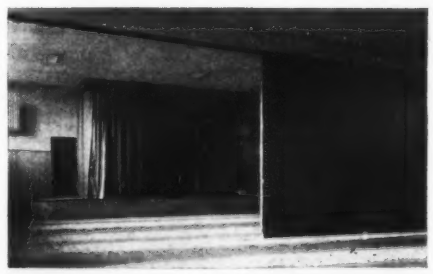

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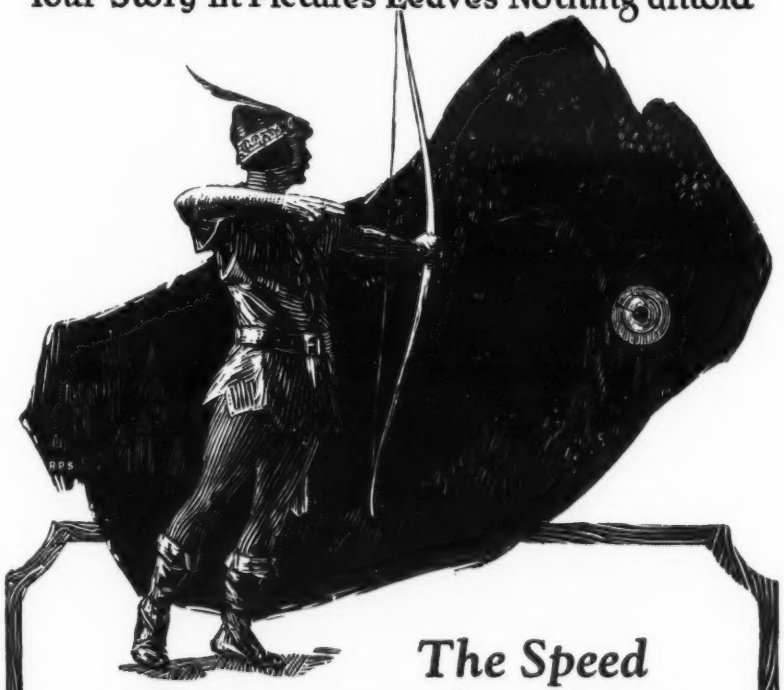

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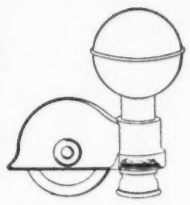

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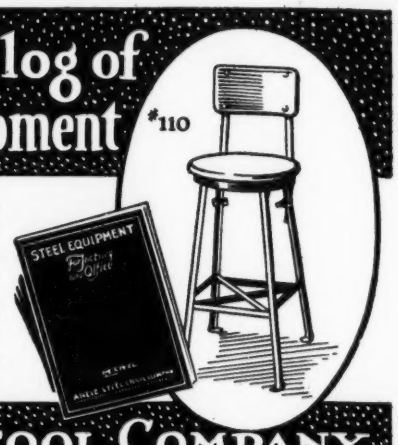

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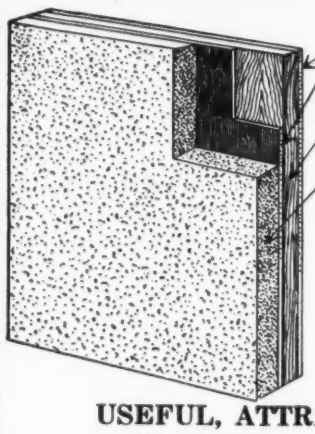

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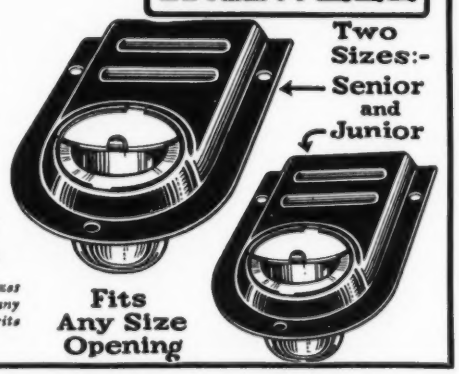

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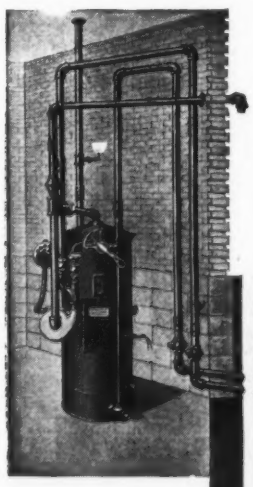

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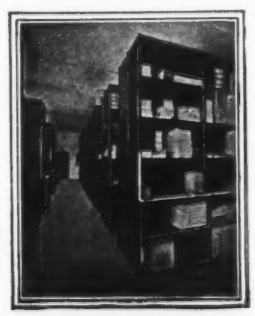

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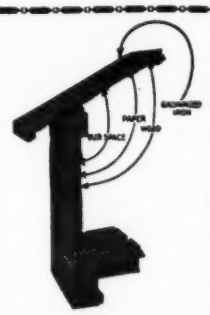

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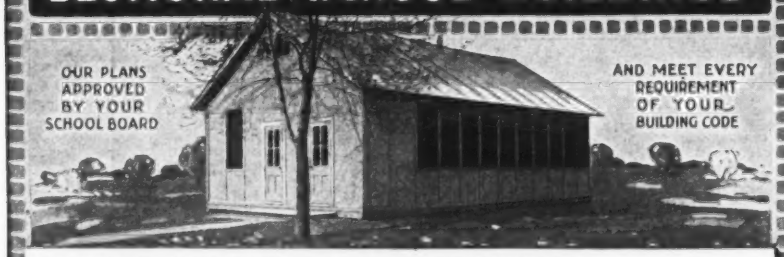

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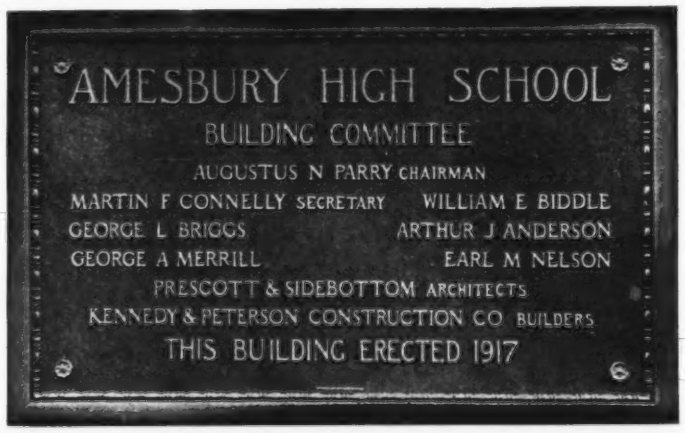

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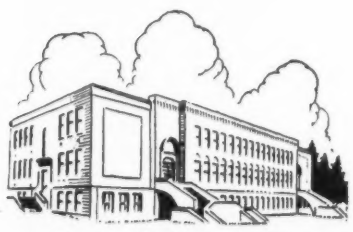

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PROMINENT schools throughout America bear witness to the economy and satisfaction found in Nibroc – the perfect paper towel. Where two ordinary paper towels are usually required—a single Nibroc will suffice. One wipes dry! Through the single distribution—one-towel-at-a-time method of Nibroc Cabinets — your towel expense is reduced to an inconsequental minimum.

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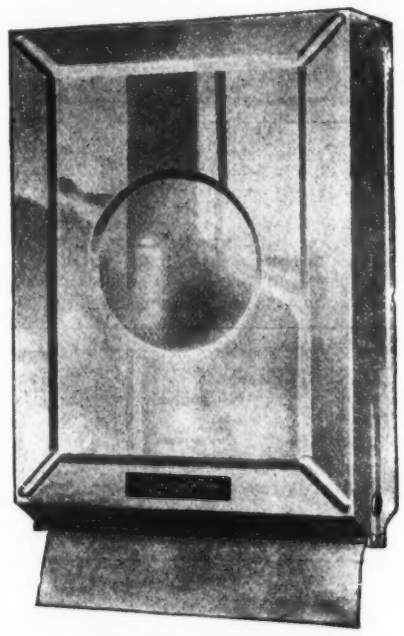

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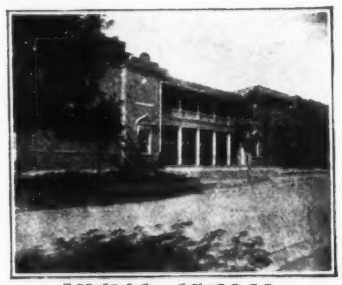

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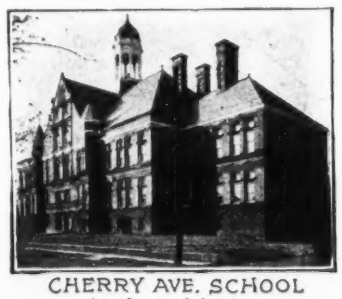

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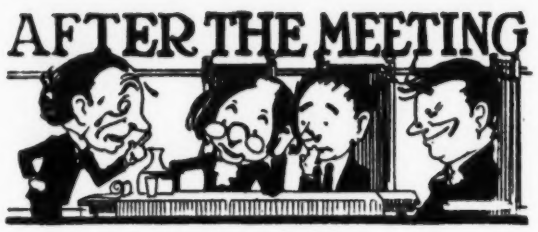


IDLE RUMORS

Rumors of school conditions in certain localities are often absurd and wholly ridiculous. E. D. Price, superintendent of schools at Enid, Oklahoma, uses the following story which he picked up somewhere to answer such rumors when they occur:

"At a gathering of Hebrew merchants, Isaac, becoming enthusiastic over stories of individual success, contributed: 'Dat fellow Rheingold rented a room 10 x 20 in Buffalo and in one year's time made ten thousand dollars.'

"For corroboration, Isaac turned to Jacob with, 'Isn't dat true, Jakey?'

"'Yes,' said Jakey, 'Except his name was Goldrine not Rheingold and his store room was 20 x 30 instead of 10 x 20, and it was Rochester not Buffalo, and it was two thousand dollars, not ten, and he didn't make it, he lost it.'"

ADVICE

Mr. O. C. Pratt, superintendent of the Spokane, Wash., schools, who is a lover of jokes, tells one that he uses sometimes:

"One of the tribulations of every superintendent arises from the well-meant advice of those whose ignorance of school conditions makes their advice valueless. On receiving such a communication, a superintendent feels like replying as a certain editor is said to have done. An amateur author submitted a story to the editor for publication in his magazine. Not hearing from the editor, he wrote him again requesting an early decision as he had 'other irons in the fire.' The editor thereupon replied, returning his manuscript and advising him to 'put it in with the other irons'."

CLEAR-CUT OBJECTIVE

The superintendent of schools, Lexington, Kentucky, Mr. M. A. Cassidy, thinks that the most effective joke that he ever used was before the Civic Clubs when he was carrying on a campaign for a bond issue for new schoolhouses. The bond issue was voted almost unanimously. The joke must have been effective, and also Mr. Cassidy.

"There was a woman who went crazy on the subject of money. Her continued cry, from one morning to the next was: 'I want a barrel of money! I want a barrel of money!' Well, she became violent and was put in an insane asylum.

"One scorching July day an old negro woman was passing the asylum. She was hot and tired, and, when opposite the asylum, she set her big basket of laundry down on the pavement. After fanning herself with her old sunbonnet, she peeked through the palings to watch the inmates exercising in the grounds. The woman who was money crazy saw her, and coming up to the fence, put her face close to that of the old negro woman and yelled: 'I want a barrel of money! I want a barrel of money!' The negro woman was startled and drew back. When she had recovered from her surprise she said: 'Well, ma'am, yo'-all mought er been crazy when dey put yo' in dar; but yo' sho' is talkin' sense now'."

EXPEDIENCY

Mr. W. J. Braham, superintendent at North Platte, Nebraska, who is also treasurer of the Nebraska High School Athletic Association, tells a story that might serve to extricate some schoolman who is faced in a meeting with a question of expediency:

"A bunch of boys had been attending a Baptist revival meeting. One day their mother found them out back of the house with a pail of water, a cat, and several kittens. They baptized the kittens, but the old cat put up a scrap and after she had scratched two or three of them, as they were trying to immerse her, one of the boys said: 'Oh, let's just sprinkle her and let her go to hell'."

He adds this rather trite question:

"Are we going to keep this organization (school) alive, and have it render service, or shall we just sprinkle her and let her go to hell?"

"GETTING UP THE AROUSEMENT"

Mr. William A. Sutton, Superintendent of Schools, Atlanta, Georgia, lends his support with a joke that could only be brewed south of the Mason and Dixon line. Here it is in his own words:

"An incident I have often used when speaking on a subject where others have given it in rather minute detail, to tell what is my part on this particular type of program. I illustrate with two negro preachers who were carrying on a very 'distracted meeting' in the olden times. One could read and write and the other could not.

"Some one asked Uncle Mose, 'What is your part in these distracted meetings?'

"Uncle Mose said: 'Boss, I'll tell you just like this: Morton who goes around with me can read the Bible and 'splain the scripture; but atter Morton done that, he done all what he can do. But if you gwine have a successful distracted meeting, you got to have somebody to git up de arousement. And dat's my part in de meetin."

"You know some of us are technicians, but others must get up the 'arousement.'"

BUYERS NEWS

Mr. Jacobson Appointed Manager. The Truscon Steel Company, of Youngstown, Ohio, in almost 25 years of service to the school building public, has had a leading part in the development of high standards of school construction. The firm believes that the successful solution of many problems in school-building construction lies in the cooperation of the school board, the school architect, and the specialist trained in problems of school-building construction.

D. L. JACOBSON,
School Buildings Department,
Truscon Steel Company.

In the direction of an enlarged service to its school patrons, and a wider scope of helpfulness to the school public, the Truscon Company has appointed Mr. D. L. Jacobson as manager of its school-building service department. The establishment of the new department has come as the result of a recognition of the importance of the school building field by the manufacturer and an effort to furnish specialized service in school-building construction.

Mr. Jacobson has had long experience in the Truscon service. He will be in charge of an organization of trained specialists who are familiar with all the latest practices and principles that make for the economical and expeditious construction of school buildings. The service department is composed of a group of trained men who have had considerable experience in the problems of school planning and construction and its services are freely offered to school boards and school architects desirous of help in the solution of their special problems.

Van Range Company's New Plant. The John Van Range Company, of Cincinnati, Ohio, which is associated with the Albert Pick Company of Chicago, has a new building under construction which will be one of the finest of its kind not only in design and construction, but in equipment and machinery as well.

The building will be located on a plot of about fifteen acres and will be composed of two sections—a single-story manufacturing section, and a four-story administration, sales, and warehouse section.

The four-story section will provide space for the shipping and receiving departments on the first floor; for the production-control offices, development department and laboratory, storage space for small goods and supplies, and employees' cafeteria and kitchen on the second floor; for the president's office, the sales and display rooms, layout and engineering departments, auditing and billing departments, and related divisions on the third floor, and for warehouse space on the fourth floor.

The main building is to have a length of 440 feet, a width of 370 feet, and a floor area of 260,000 square feet, with provisions for platform and switch-track enclosures.

The building has been planned and erected by the architectural firm of Samuel Hannaford & Sons, Cincinnati, and is to be completed early this spring.

With the completion of this building, the Van Range Company will be able not only to maintain the past high standard of its hotel, restaurant, and school-cafeteria equipment but to surpass both in quality and volume all previous efforts.

NEW TRADE PUBLICATIONS

How to Apply for a School. The Rocky Mountain Teachers' Agency, of Denver, Colo., has issued a suggestive booklet entitled "How to Apply For a School and Secure Promotion."

The booklet contains some useful data on the laws and regulations governing teacher employment in the western states and describes the service rendered by the agency to its teacher-applicants. The booklet represents the experience of the author as a teacher, principal, and superintendent, and as the director of a teachers' agency.

Dunham Heating System. The C. A. Dunham Company, of Chicago, Ill., has just issued two helpful booklets on heating systems.

Bulletin No. 114 is devoted to the Dunham vacuum heating system for homes using coal, gas, or oil.

Bulletin No. 115 describes the system used in heating office buildings, hotels, schools, and apartment houses.

Two important features of the Dunham system are the provisions for increased heat during severe weather and for sufficient heat without overheating during mild weather in the spring and fall. Two advantages claimed for the system by the Dunham Company are appreciable fuel economy and comfort, without overheating in mild weather.

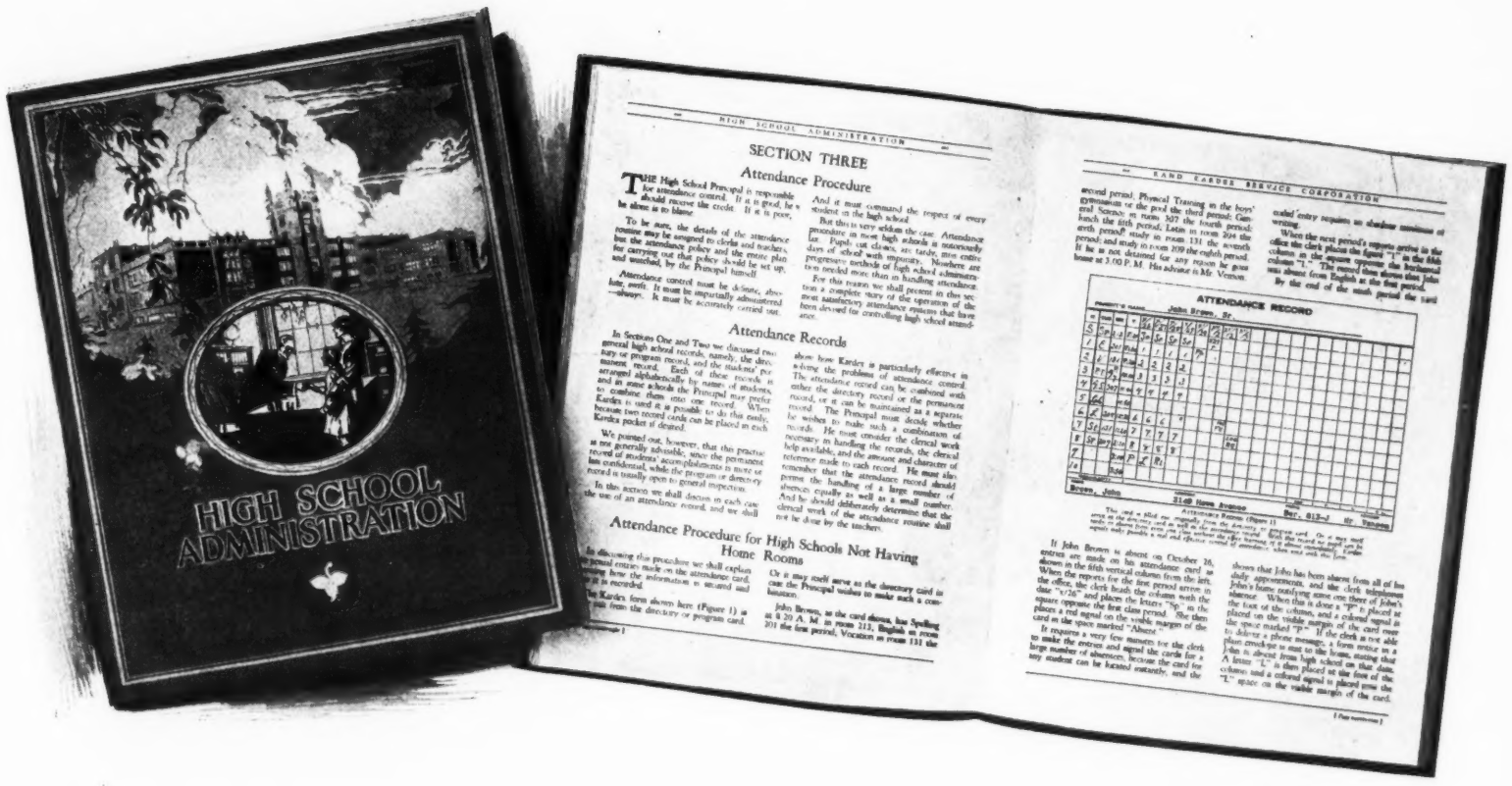
The Dunham Company maintains a number of branch offices and offers the services of its personnel to building owners. It is at all times ready to cooperate with consulting engineers, architects, and contractors, and to furnish details and information as to the best way of installing and using the Dunham products.

Issue New Furniture Catalog. The Standard School Equipment Company, of Louisville, Ky., has issued its 1927 catalog of school furniture. The catalog contains 70 pages devoted to desks, tables, bookcases, cabinets, chairs, stools, dictionary holders, restroom suites, and dormitory furniture. Each piece is accompanied with a description and photograph for the benefit of the school official who is in need of specific help in selecting school furniture.

The firm also issues a paper catalog, punched, but without covers, giving prices and description of standard office and school furniture.

A third pamphlet describes the Louisville plant and its several branch plants for the production of standard school equipment. The firm maintains five branch factories, in addition to the one at Louisville—three at Jasper, Ind., one at Elizabethton, Tenn., and one at Silver City, N. C. Two plants specialize in the manufacture of teachers' and office chairs; one deals exclusively in teachers' desks and tables and office furniture; one specializes in map cases, grade and kindergarten tables, and bookcases; one deals in square-post kindergarten and grade chairs, tablet and teachers' chairs, and a fourth plant specializes in American bentwood chairs, stools, and fiber furniture.

Here is a Book that *Every* High School Principal *Should* Read!



EVERY High School Principal should read this new book on "High School Administration," written by a nationally known authority on this subject, and which is now ready for release by Rand Kardex Service.

In this book are explained many of the standard practices of high school administration now in vogue in scores of high schools throughout the country.

The fact that High School Administration is now definitely recognized as a profession which requires the highest type of educational and business qualifications, has been brought out in this new book. Rand Kardex Service has brought together in one volume, all of the accepted and best practices of high school administration.

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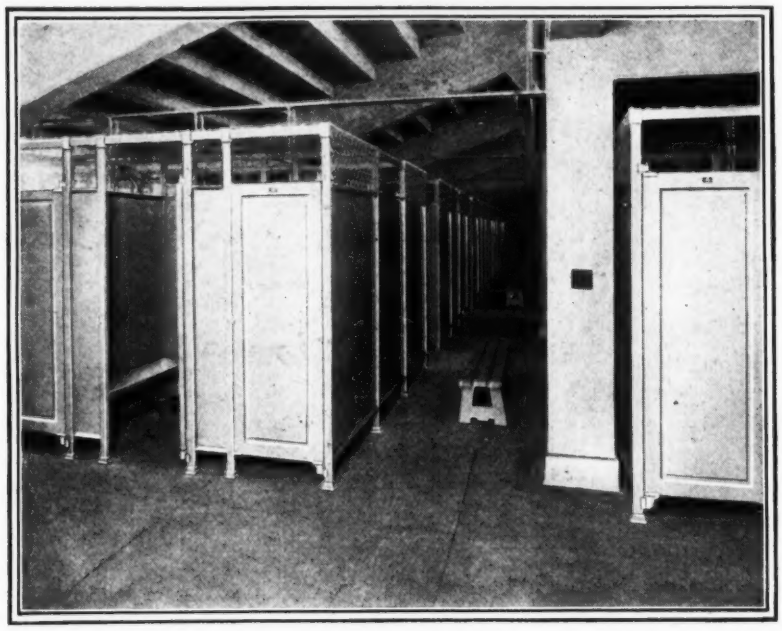

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Austin & Ashley, Architects

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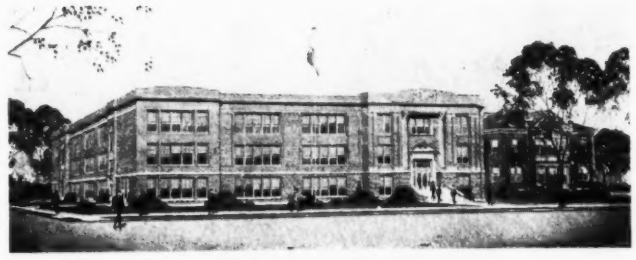
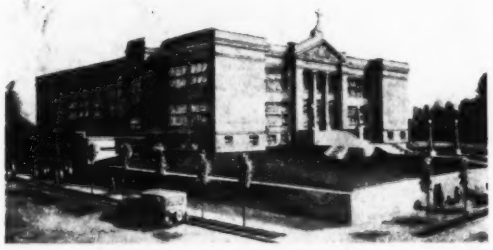
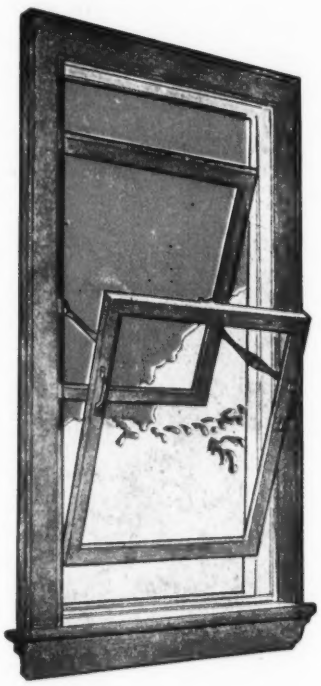
Abington High School Addition, Abington, Pa.,
Heacock and Hokanson, Architects.

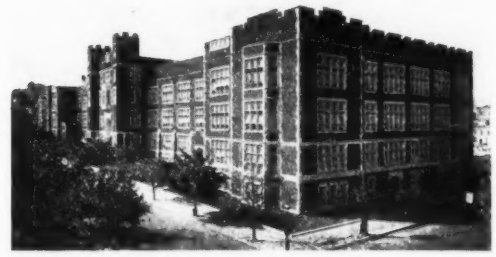


Junior High School, Elizabeth, N. J.,
Howard B. Brady, Architect.

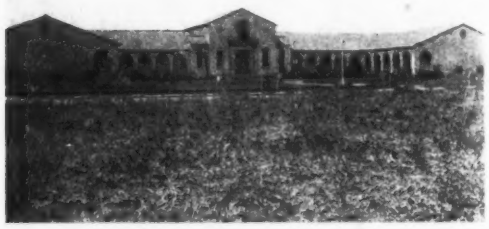


Sacred Heart Parochial School, New Brunswick, N. J.,
Geo. W. Brooks, Architect.



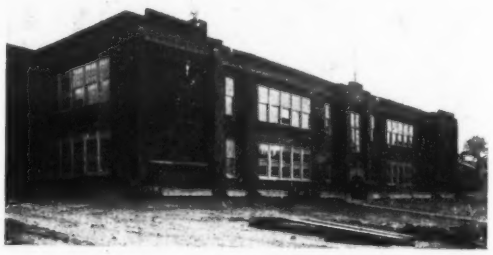


Dunbar High School, Washington, D. C.,
Snowden Ashford, Architect.



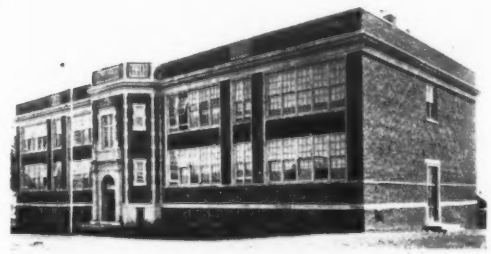
McKinley School, San Gabriel, Cal.,
Quinten and Kerr, Architects.

Nathaniel Hawthorne High School, Yonkers, N. Y.,
G. Howard Chamberlin, Architect.

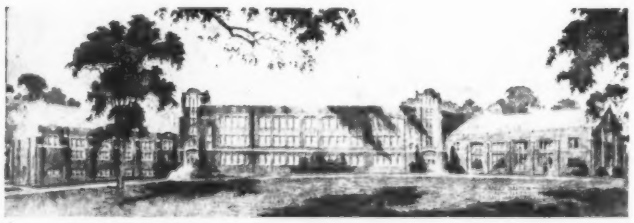


Harry L. Johnson School, Johnson City, N. C.,
C. Edward Vosbury, Architect.

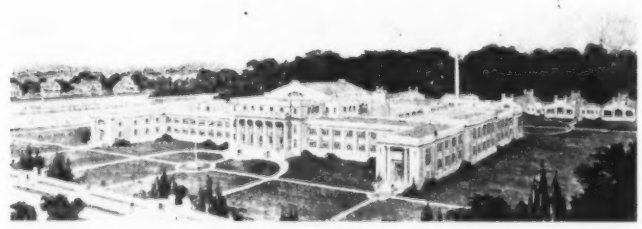
Ventilation Without Draft



Franklin School, Bloomfield, N. J.,
John F. Capen, Architect.



High Point High School, High Point, N. C.,
Harry Barton, Architect.



William Penn High School, Harrisburg, Pa.
Charles Howard Lloyd, Architect.

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